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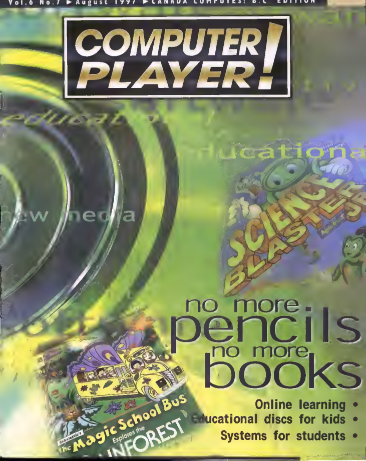
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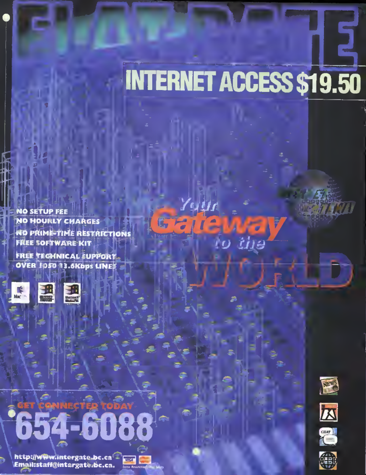

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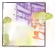

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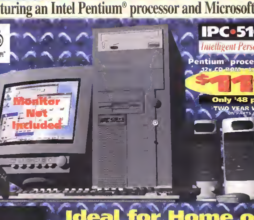

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About the Cover
Jennifer Hanlon Scott used Photoshop 4.0 motion and paint filters and Adobe Illustrator 6.0 to create this month's cover, which features educational CD-ROMS that are reviewed in this issue.

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The Whole Wide World

letter from the editor

It may seem premature to be writing about "back-to-school" themes—especially as summer has only recently appeared here on the West Coast—but as this issue illustrates, education in the Information Age is rapidly expanding, not just beyond the physical limits of the classroom but also beyond the confines of the school year.

Computers and especially the expansion of networks are making lifelong learning a reality—and a necessity. Some children will be returning to their classrooms in September fresh from computer camps where they will have created Web sites, programmed PCs and participated in projects with kids on the other side of the country and around the world. And because their education didn't stop when the last bell rang at the end of June, their teachers also have to be up on the possibilities of new technology to keep these computer-keen kids from nipping at the heels of their own nascent computing knowledge.

"Some children will be returning to their classrooms in September fresh from computer camps where they will have created Web sites, programmed PCs and participated in projects with kids on the other side of the country and around the world."

Computer-aided education is stretching across the boundaries of age as well. Multimedia CD-ROMs are now available to help children as young as three begin to read and become comfortable with a keyboard, mouse and monitor. The boundaries are being crashed at the other end of the age spectrum too. Curiosity and eagerness to learn about possibilities of computing is not limited to the young. The most curious and enthusiastic attendee I saw at the recent Comdex Canada 97 was in his 70s. We kept crossing paths as we travelled through the Metro Toronto Convention Centre, and I witnessed him trying out every new gadget and having the details of every piece of software and hardware explained to him.

The definition of "ability" is also changing, thanks to new technology. It is opening doors to people previously isolated by their handicaps. In our guest column this month (page 35) author and business executive Hillary van Welter describes how she witnessed computers being employed to help open up the world of learning to even severely disabled children.

In this issue we see how online learning is providing access to people previously unable to participate due to time or distance barriers (see page 10). And British Columbians, true to their pioneer spirit, are leading the way. Researchers at both of the universities in the Lower Mainland are developing software and other tools that enhance the participation of students in remote locations, allowing them to tailor their course of study to their needs and schedules.

Less formal learning is proliferating on the World Wide Web, where, for example, there are free courses for learning a number of languages, including Chinese, French, Welsh, Arabic and even Maori (see page 14).

For the curious, technology is tearing down barriers and opening up the whole wide world to those who want to take the trip.

New face

Regular readers of the *Computer Player!* will notice that mine is a new face on this page. The good news is that Editor-in-chief Mara Gulens, who is based in Toronto, will still be carefully crafting the editorial direction of the *Computer Player!* and the other *Canada Computes!* titles. The *really* good news is that, with an associate editor here in Vancouver, we'll have an opportunity to give better coverage to computer-related developments and news in British Columbia. To that end, let us know what you think and what you'd like to see covered in the *Computer Player!*

For those of you who have enjoyed Mara's monthly observations, take heart: you can still read her column every month at the *Toronto Computes!* Web site: just point your browser to http://www.torontocomputes.com/

Megan Johnston
Associate editor
meganj@tcp.ca

Your letters please

Letters on issues raised in the paper or general computer topics are welcome. Please be brief. We regret that we are unable to look up stories from past issues, suggest products or solve all your computer problems. Only those with names and e-mail or snail mail addresses will be published. Letters may be edited for space or content.

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Cluster size Does Not Compute

Alan Zisman's article "Waste not, want not," in your July 1997 discusses an important issue: the waste of disk space caused by large cluster sizes.

Unfortunately the article overstates the case in two of three examples. If a drive has a cluster size of 4 (1 024) characters or bytes, and each file wastes an average of half a cluster, then 1 623 files waste 3,323 904 characters (based on a calculation of 1 623 x 4 x 1 024 / 2) in approximate agreement with Mr Zisman.

However, if the cluster size is 16 (1 024) characters, then 8,408 files waste 68,878,336 characters (based on a calculation of 8,408 x 16 x 1 024 / 2), about half the 135 million Mr Zisman indicates.

Similarly a cluster size of 32 (1 024) characters and 10 000 files waste 163,840 000 characters (based on a calculation of 10 000 x 32 x 1 024 / 2) about half the 320 million Mr Zisman indicates.

I agree entirely with the main point of the article that waste should be minimized. I correct the examples only to strengthen the case. The correct numbers in the second two examples may not be as large as Mr Zisman said but they are still big.

David P Maroun

Alan Zisman replies: David Maroun is absolutely correct: he caught me in a math mistake (and me a math teacher in my day job!) I suspect I neglected the last step dividing by two. However, the reality, at least on my hard drive, is worse than the figures correctly estimated by Mr. Maroun. In fact, they are closer to my (incorrect) math—in fact, more exact measurements of that 800 MB partition drive (which I've cleaned up to now have "only" 6,113 files) suggests 102 MB of waste space representing 22 to 30 percent waste (depending on whether you compare it to the total space used, or the space actually used by files).

Mr Maroun is right in his conclusions... cluster waste is a problem, and we all (even I) need to double check our math!

Cheap Shots

I was interested in reading that digital cameras are getting smaller and cheaper (Digital camera survey, July issue). What I am not clear on is the operating cost or per-picture cost of these systems. Am I correct that the cost is negligible, i.e. so small as to be insignificant? If so, it wouldn't take many snapshots to add up to that US$199!

Sincerely
Franklin Wayne Poley via email

Megan Johnston replies: Your assumption that the operating cost is negligible is correct, because there are no consumables—i.e. film—with digital photography. (There is, of course, the cost of batteries, but this is also the case with film-based photography.) For some digital cameras, extra memory in various forms can be purchased, but even this is reusable. The more significant consideration at this point in the development of digital still photography is quality. At the consumer level, film output still has the edge—for now.

The Return of OS/2 Ready

One of the main reasons I make a point of reading the *Computer Player!* each month is Kevin Linfield's OS/2 column. Hope it's back in the next issue.

Thanks Dave Cull

Continued on page 8

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Opening the July *Computer Player*, I find Kevin Linfield's "OS/2 Ready" column nowhere to be found. Please bring it back! It's sorely missed.

Thanks, Michael Skillingford

Megan Johnston replies: Your wish is my command, OS/2 Ready returns this month to the Computer Player *on page 30. Also, for more on OS/2 turn to the "You Asked Us" column on page 56 for Kevin Linfield's replies to OS/2 reader's questions.*

Another OS/2 fan

I have to say that I enjoyed your article (Alternative Storage *CP!* June 97) which made me somewhat regret the purchase of my JAZ drive. That is until I went into SyQuest's Web page looking for OS/2 drivers for the SyJet drive. To my dismay, I could find no indication that Syquest had ever heard of OS/2.

Since you have shown good support for OS/2 over the years, I feel that it should be mentioned when OS/2 drivers are not available for a recommended product.

(I'd also pass on to SyQuest that they are ignoring 20 million potential users who are technically more aware and therefore more likely to choose the technically best product if they support it under OS/2.)

Richard Dinning, via email

White Pages to list email addresses, URLs—for a fee

The next White Pages listing delivered to your door will likely be a little fatter. BCTel is now offering to include email and uniform resource locator (URL) addresses below the phone listing for your business, residential or government number. If you have more than one electronic address—no problem. You can have both (or all) listed. Cost for the new service is billed to your monthly phone bill at a rate of $1.60 (plus tax), with an additional one-time "administration" charge of $9.50.

According to BCTel, having your email address listed in print avoids the confusion accompanied with trying to communicate your address verbally over the phone—especially if your address includes unusual characters or keyboard symbols.

In keeping with the program, requesting your electronic listing be included in the White Pages can only be done electronically through an order form found on the BCTel Web site at http://www.bctel.com. You'll also find the deadline for submitting email and Web addresses for your area's next White Pages directory and the date the directory will be issued, on a schedule found on the Web site. If you have questions, email BCTel directly at wplistings@bctel.com.

Street
Buzz
Steve Bain

Glenayre Gets Huge Taiwan Contract

ChungHwa Telecom, Taiwan's national telecommunications company has contracted Vancouver-based Glenayre Technologies Inc. to establish a new high-speed nation-wide paging network—a deal valued at more than $31 million. ChungHwa Telecom is Taiwan's largest provider of paging services with more than two million subscribers. The new network will be capable of increasing the company's capacity by more than one million subscribers. During the next year Glenayre will build three huge switching wireless messaging switching centres, and will install more than 1,500 transmitters and system controllers.

Glenayre provides telecommunications equipment and related software used by leading personal communications service (PCS) providers worldwide. The company specializes in paging, cellular voice processing, point-to-point wireless interconnect and communications network administration products and systems. Glenayre's net sales reached roughly $400 million last year and the company employs approximately 2,100 people worldwide. For more information on Glenayre see the company's Web site at http://www.glenayre.com.

Profits Jump for Vancouver CBT Developer

Vancouver-based FirstClass Systems Corp. recently announced a significant increase in fiscal year end profits. Profit grew 75 percent reaching nearly $140,000 on revenues of roughly $10 million compared to the previous year's profit of $40,000 on revenues of roughly $5 million. FirstClass Systems Corp. has been developing computer-based training and interactive multimedia courseware since 1987. For more information on FirstClass go to the corporate Web site at http://www.firstclass.ca.

Continued on page 11

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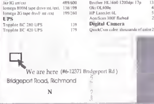
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Online Education

by SANDRA MINGAIL

Day by day the choices in online courses become broader and more sophisticated in delivery. Distance-education students can register for accredited university courses, graduate degrees or special-interest non-credit lessons. Even high-school and elementary students can elect to learn from the comfort of their home—although the selection remains limited for this age group.

New Breed of Custom Courseware

Traditionally post-graduate universities offered distance-education courses replete with textbooks, audio cassettes, and stringent deadlines for submitting assignments. Teacher-student communication was limited to telephone calls. Distance learning was essentially an isolating experience.

Today the emergence of client-server courseware enables student-instructor connections in pedagogically sound learning-teaching scenarios.

Toronto's Humber College uses a version of client-server software called Worldgroup. The software enables students to communicate with teachers through email forums as well as text and graphics chat mode. A special chat channel puts students in touch with fellow learners. Worldgroup allows students to access Humber's learning software over the Web, as well as the school's collection of CD-ROMs.

At the University of British Columbia's department of computer science, Murray Goldberg has been instrumental in the design of a distance-teaching tool set. Over 500 universities, colleges and businesses in almost 40 countries have signed up for beta testing of WebCT. The tools built into this software are designed to maximize communication and collaboration over the Web.

Using WebCT, synchronous sharing of information is enabled through chat areas. Students take notes online, generate a custom study guide, track their course progress and assess their learning on an ongoing basis. The software offers instructors a host of options. Course management, module revisions, online marking, record management and student tracking are all supported.

Linda Harasim and Tom Calvert, professors at Simon Fraser University in Burnaby, have developed Virtual-U, another server-based software system designed for the delivery of Web-based training courses. Virtual-U is being field-tested at 15 educational and corporate locations across Canada.

This software incorporates templates that prompt instructors on information such as required course readings, grading standards, group-conferencing assignments, and weekly overviews. Collaborative groups are set up and tasks and objectives defined. Conferences and sub-conferences are created. Students can take on roles as moderator, participant or observer.

As with most Web-enabled courseware, multimedia components such as video, audio clips and animations may be inserted into course modules or messages.

Current online courseware claims to be based on principles of active learning and collaboration, hence the heavy use of both asynchronous as well as synchronous conferencing. A licensing model of distribution seems to be the norm. Educational institutions purchase a single server licence with a cap on how many students can enroll in a course. The greater the number of students, the greater the annual licence cost. Online training and support from the software developer increase the tab.

Emerging Courseware publishers

More and more educational institutions or corporations recognize the benefits of distance education. Yet for many, the knowledge and monetary commitment in course development is prohibitive. This need has spurred the development of commercial publishers of interactive Web-based courseware.

University Online (UOL) assists corporations and academic institutions in developing online courses. They acquire, convert and develop online course content for delivery over the Internet and corporate intranets. UOL acts as either a courseware-development consultant or a licenser of its own Web-based delivery system. It has formed a number of partnerships with established institutions, such as the University of California at Berkley's continuing education department. The schools provide the content expertise while UOL provides the design and technical know-how.

This fall UOL's course catalogue will include 50 different offerings including 3D Solid Modeling, AutoCAD and Financial Accounting.

In-house solutions are surfacing as well. The University of Alberta's academic technologies for learning group works with the university's departments to develop new instructional approaches. Professional development support

Provincial Network Initiatives

As more and more Canadian school boards get wired, we witness a greater number of partnerships that pool talent, technical, and monetary resources. The New Brunswick educational network is working to empower its large base of rural communities. A 1993 study claimed that more than 52 percent of the province's population never completed high school, with more than 24 percent of adults possessing less than a Grade 9 education. The province is making a major commitment to its distance-education strategy to improve these circumstances.

British Columbia's Open Learning Agency, based in Burnaby, is a partnership between government, industry and education. The agency offers accredited university courses as well as Kindergarten to Grade 12 courses. An online work-internship program was initiated in the past year.

British Columbia's Open School program follows the provincial curriculum. It is a branch of the technology and distance-education division of the Ministry of Education, Skills and Training. Open School services are delivered in partnership with the Knowledge Network and the Community Learning Network. Current courses include first nations studies as well as adult basic education.

Challenges Ahead

Without a doubt innovations in distance education—like most areas of computer technology—keep on barreling forward. Yet those committed to online learning must surmount fundamental issues.

Rob Higgins of the Gymnasia Virtuales has served over 300 online learners over the past year. One of his Institute's most popular courses teaches instructors how to deliver an online course. According to Higgins, many people believe that traditional course material can easily be reworked and posted as a type of online lecture format. To Higgins this defeats the real potential of distance learning as a medium that fosters cooperative learning and group interaction.

As online education matures, so too will the many flavors of technical solutions and pedagogical strategies. With luck, students will reap the benefits. ◆

Teaching Writing by Email

by Paul Lima

These days the Internet is being used for more than sending email, searching for information or shop shop shopping. Increasingly it is becoming an interactive training medium.

As someone with 15 years experience teaching writing and communications courses and as someone interested in technology and communications, I wondered if the Internet could actually replace the classroom. So I converted my in-class creative writing, freelance writing and media-release writing courses to cyber lessons—complete with lectures, personal exercises and assignments—and went looking for online markets.

The first question that came to mind was: How do I promote my courses? The answer: online, of course. I set up a Web site outlining the courses and promoted them in appropriate newsgroups and mailing lists.

While the response wasn't overwhelming, I was pleased and surprised that students signed up. After all, I'm an individual, not an educational institution. But I feel I established my credibility with an informative, well-designed site and with prompt replies to requests for information.

Going Mainstream

After running a few private courses successfully, I contacted the continuing-education division of Georgian College (a community college located in Barrie, Ont.) and asked administrators if they wanted to make my courses part of their continuing-education program. They did and since last fall I have conducted online training for over 50 private and college continuing-education students.

Students either send me a (no I am not into online commerce yet) or register for courses through the college. Once registered, students receive lessons by email. They also use email to ask questions, submit assignments, receive feedback on assignments and to communicate with other students.

While I'm located in Toronto, the world has become my classroom. I have conducted courses for students in Vancouver, Calgary, Barrie, Orillia, Toronto, Ohio, California, Jamaica, and South Africa.

The only pre-requisites for the courses are the desire to write and the ability to send and receive email. Each course module includes lecture notes, research and writing exercises, and assignments students submit by email for feedback. This is similar to in-class situations where instructors use a variety of techniques (lectures, exercises, assignments and feedback) to keep courses interesting.

College students have set course start dates and have to complete courses within a set period of time (about 12 weeks), but private students can start courses any time and work at their own pace.

Although my courses are designed like traditional snail-mail correspondence courses, email makes the interaction more immediate and fulfilling. And I am now looking at setting up a mailing list for even greater interaction and at offering courses designed as HTML files.

Shaking the dust off

There are differences between teaching in a classroom and teaching online, but not many. While I don't miss writing on blackboards and inhaling chalk dust, I did miss the immediate feedback an instructor gets when looking at a class of students roll its eyes, laugh or start to work.

The feedback comes as classes progress, however, and students become bolder. In one course I even had a class clown who sent me witty notes and got other students giggling.

Overall, feedback from students has been positive. Many have told me they felt they were getting "individual attention" and "personal feedback" even though the course was conducted online Others liked the fact that they could work at their own pace As one said "I enjoyed not having to rush off to class at 7 p m on a cold snowy night"

It seems cyberspace generally has opened many opportunities for business partnerships Conducting online training has led to several opportunities for me After six months of conducting courses I've established new partnerships with Sheridan College and with an educational broker in the United States who co-ordinates courses for several American universities.

And there has been an unexpected bonus several corporations have asked me to develop online writing and communication courses for their employees.

So can the Internet replace classroom training? Based on my admittedly limited online training experiences the answer is yes And as audio-video interaction over the Net evolves it will become an even more effective and interactive training medium

Contact the writer via Paul Lima Communications Web site at http //web.idirect.com/~canuck ◆

Street Buzz

Continued from page 8

Maximizer Releases Free Web site Creation Software

Last month Vancouver-based Maximizer Technologies Inc announced the free release of MARKETbuilder a wizard based Web site creation tool capable of quickly creating "professional-looking" commercial Web sites MARKETbuilder is integrated with the company's leading contact management software Maximizer 97 Each MARKETbuilder Web site is hosted at no cost in an online business site called the Maximizer BusinessNet found at http //bnet maximizer com. Users may download customer profiles from the site directly into their existing Maximizer database Maximizer Technologies is a privately held company in the MultiActive Group of Companies, owned by Terry Hui president of Concord Pacific Developments Ltd For more information on Maximizer Technologies call 604-601-8000 or point your browser to http //www maximizer com

Reboot producer trades on TSE

Vancouver-based animation producer Mainframe Entertainment took to the Toronto Stock Exchange recently under the symbol MFE. Mainframe creates the all CGI-based *Reboot* and *Beast Wars* animated television series, which is aired in 46 countries. The company launched the initial public offering at three million shares priced at $10 each Toronto-based Alliance Multimedia recently sold back 700,000 of its shares to the giant animation studio Mainframe is also producing two IMAX films and a computer game based on *Reboot* in conjunction with computer gaming giant Electronic Arts

ALI Technologies, IBM to Develop Clinical Image System

Vancouver-based ALI Technologies and IBM are jointly developing a medical image archiving technology capable of serving entire regional districts The Canadian Network for the Advancement of Research Industry and Education will fund the new venture with a $336 000 repayable grant. The project was awarded on a competitive basis with ALI's submission being chosen from 250 applications. ALI develops medical image management networks for hospitals and proprietary software and hardware systems for clinical imaging

Steve Bain is the Computer Player/Canada Computes western correspondent in Vancouver Canada Send news tips, questions or comments to Steve@helix net. ◆

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Lessons and Laughs:

CD-ROMs For Kids

by S.J. Ross

With delightful characters and engaging interactivity one of the best advantages the computer can offer children is a lesson that is so fun they want to learn. So keep the likes dislikes, and educational abilities of your child in mind and read the following reviews for tips on some of the hottest educational CD-ROMs available (note all prices are suggested retail)

Ready to Read with Pooh

From Buena Vista Home Entertainment. Contact. 800-899-0431 Price $45 $49

Gather round girls and boys cause if you re between the ages of three and six you can join Pooh and his friends to play games color listen to music watch cartoons earn certificates, and read letters addressed to you.

Set in the 100 Acre Wood learning activities are centered around stories where children can interact with A.A. Milne s characters And when the child has successfully accomplished a task, he or she is rewarded with songs and prizes

Oozing with charm and offering three levels of difficulty and clues to help your child Ready to Read with Pooh provides nine fun activities designed to teach and reinforce basic language skills such as the alphabet upper and lower case letters phonics spelling, drawing letters, and rhyming simple words Pooh who recently celebrated his 70th anniversary is as endearing as ever

The Interactive Alphabet

From Hoffman + Associates. Contact 888-464-5652 Price $22 99

Finally a Corel CD-ROM that is fun exciting, and designed to take advantage of some of the benefits of multimedia Now owned by Hoffman + Associates (although still bearing the Corel logo) The Interactive Alphabet is a charming multimedia alphabet where goofy characters—including a happy space creature a dancing reptile and a sheep on snow shoes—introduce children ages three to seven to letters and words

The child can choose the letters they wish to learn about can hear a story and watch a fun animation sequence packed with words starting with the chosen letter and can pick letter-related words to hear and view additional animations Children can listen to narration or read to themselves and can click on individual words to hear pronunciations

Focussing on 500 words the program is easy to learn, engaging and full of visual and auditory candy But with, for example no animated writing to teach your child how to write letters The Interactive Alphabet focuses strictly on recognizing letters and words

My First Incredible Amazing Dictionary

From Dorling Kindersley distributed by General Publishing Contact 800-342 5357 Price $36 95

Aimed at kids ages three to seven including those who cannot yet read or have never used a computer it is a fun, interactive introduction to 1 000 words With 3 000 sounds more than 1 000 illustrations 850 animations, 2 500 pronunciations and the option to read or listen to words definitions, and instructions My First Incredible Dictionary is packed with whimsey

Of the three games included—Guess What Spell It and What s that Noise?—the last game with fun noises occurring when the user is right wrong, and once the game is correctly concluded is the most fun.

Science Blaster Jr

From Davidson & Associates. Contact. 800-545-7677 Price $40 (Mega Math Blaster is $50)

The latest release of the Blaster series, this disc centers around Blaster a spaceship that allows children to collect sort and categorize items as they travel through space Aimed at children four to seven years old Science Blaster Jr Includes graphics animation and music in an amusing journey through science Children can sing along with Blaster songs interact with delightful characters play games, and earn certificates.

Some of the experiments children can conduct include measuring various animals to understand size relationships, and mixing colors to understand color theory Children will also learn about animals and plants historical scientific discoveries weather and seasons, and the properties of sound If you enjoy this title consider Mega Math Blaster which also provides resources for parents

How Would You Survive?

From Grolier Interactive Contact 203 797 3530 Price US$24 99

The only CD-ROM to ever crash my Pentium How Would You Survive is one part picture book with a primitive animation and slide show and one part question-and-answer quiz Offering a comprehensive look into the lives of ancient Egyptians, Vikings and Aztecs How Would You Survive—designed for children ages seven to 12—includes topics ranging from landscape wildlife and family life to lifestyles, clothing religion crafts farming, health care and morality Users can examine regional maps and time lines describing major historical events listen to an animated child narrator (although narrators from different civilizations have suspiciously identical scripts) click on various objects on the screen and view narrated slide shows

Billed as an "interactive adventure the CD-ROM is more book than game but the information is comprehensive and interesting the navigation is relatively simple and a child fascinated by one of these cultures may find the CD-ROM quite interesting

The Magic School Bus Explores The Rainforest

From Microsoft Contact 800 563 9048 Suggested retail price $44 95 (each title)

This sixth and newest title in Scholastic s Magic School Bus series provides children with a wonderful interactive romp through a rainforest teeming with plants and animals. Recommended for children ages six to 10 the disc offers a variety of multimedia tools including a butterfly net (to see color photographs of different butterflies) a field guide a magnifying glass to magnify areas of interest a spotting scope to view distant items and close-captioned features including the words to the theme song, and the ability to pause the program or read or print spoken dialogue

With video clips narration sounds animation and photographs, this CD-ROM makes excellent use of multimedia—especially animation—to provide a fun-filled tour of the rainforest. From screens loaded with exciting hot spots to endearing animated animals and people The Magic School Bus Explores the Rainforest has enough fascinating things to do to engross your children for hours

S.J Ross, an independent corporate, marketing, employee, and public-relations writer and consultant for an extensive portfolio of corporate and government clients can be reached at sj ross@guildnet.org ◆

B.C. CD-ROMs Offer Lessons in History, Geography, Creativity

BY JUNE CAMPBELL

Here s a trio of educational CD-ROMS from B C software developers

Adventure com U S.A.

From VR Didatech

Web site http//www vrsystems.com

Price. $49 95, $59 95 (school version) $210 (five-computer lab pack)

Produced by VR Didatech in Burnaby this CD-ROM focuses on American heritage and culture You'll view the United States as a whole or by region—investigating time zones geographical information highways and waterways historic and heritage information and more This disc is fully interactive and Internet enabled and users can add their own video pictures sounds and text to create personal adventures or may opt to create interactive adventures with others via an FTP site Designed for use in school projects, the Adventure com comes complete with lesson plans but is also recommended for family projects business presentations, the travel industry and personal projects Although rampant with symbols of U S patriotism Adventure com U S A is a well-designed entertaining and informative project. It comes on a Win/Mac hybrid CD-ROM

Making History-
Louis Riel and the North-West Rebellion of 1885

From, Momo Multimedia

Tel 800 267 7710

Price $89

This CD-ROM is believed to be the most complete compilation of Information on Louis Riel ever assembled Taking more than two years to produce Making History is a not-to-be missed study of this exciting period of Canadian history

Your journey starts aboard a train bound for the North-West Pavilion. Once in the pavilion, you'll navigate through seven rooms—each providing a different set of information on the Riel years In the Theatre a nine-minute documentary introduces you to the topic Moving along you can read newspaper clippings in the Newspaper Reading Rooms or use the Map Room to see how events were shaped by land divisions, railways and political boundaries. The Documents Library features transcripts of letters and statutes while the photo albums in the Trading Post give you glimpses of people and events A visit to the Kinetoscope Arcade offers interviews (video

Continued on page **15**

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Language Lessons

by Lee Lester

GO VIRTUAL

Globalization the World Wide Web international MBAs—despite English effectively being the world's lingua franca the need to speak foreign tongues has never been greater Happily learning another language has never been easier—or cheaper.

I first learned how simple it could be when I noticed an offer on an Internet newsgroup for a course in German I think it was offered as an experiment by the University of Erlangen and lessons could be sent in by email for marking

And if business degrees can be earned via the Web why not another tongue? There are some 6 000 languages spoken in the world today and there are free online courses in most of the dominant tongues—and some of the more unusual ones too.

A cursory search showed Chinese French Japanese and Spanish to be readily available A course in Arabic is on its way Even languages almost unknown in the West such as Hmong Kurdish and Maori have their own Web sites

Of course, it's all very well to use the Web to acquire vocabulary and learn the rules of grammar and syntax but how do you learn to pronounce say "aktiengesellschaft" (a joint stock company) like a German or tell a French waiter "M sieu, il y a une mouche dans la soupe" (there's a fly in the soup)?

Speak Up

Just as in a book online courses can provide phonetic approximations—but the big plus of online learning is that sound files can be provided Download them record your own attempt, and compare Just like language courses on an audio cassette or on CD-ROM

Some language Web sites provide another big plus discussion areas where even those with limited knowledge of a language can read what others have to say and contribute to discussions Make a mistake and you are likely to have it gently drawn to your attention And participants are likely to be as helpful as in other areas of the Net such as those dealing with hardware or software problems

Surprisingly my search did not turn up many universities offering online courses There's money there for the language departments of fund-stricken Canadian universities if they seize the opportunity

Of the major Western languages only German proved difficult to find. The one Web site that clearly offered German caused my Macintosh to freeze every time I tried to access it There are many Web sites offering English lessons

But let's face it To master a new tongue there's nothing like speaking. With the growing use of Web phones you could soon be practicing your pronunciation and vocabulary with a native speaker in Basle Barcelona, or Berlin. Bonne chance! Viel glück! Good luck! ◆

Language Lessons

Here is a selection of Web sites offering free courses in foreign languages

Chinese· With Welcome to Online Chinese 101 Dr. Zhang Lizhong of Latrobe University in Bendigo Australia has developed a simple but comprehensive introduction to a complex tongue that is becoming increasingly commercially important Go to http://chinese.bendigo.latrobe.edu.au/lesson1.htm

French. Ooh, la-la! Net Lecturers, Le Guide de la France features voice-activated buttons with native French voices, and French chat. To brush up on our other official language, go to http://www.oanet.com.au/France

Hungarian It's said to be about the hardest European language to learn. But if you fancy your chances and want to ask for goulash in Budapest, this site offers a comprehensive introduction, which can be viewed at http://www.sas.upenn.edu/~arubin/hungarian.html

Japanese Try this award-winning site operated by Pacific Software Publishing Inc of Bellevue Wash. To begin with the nicely set-out introduction, go to http://www.Japanese-Online.com

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Latin: London's *Daily Telegraph* ran a 20-week series as an introduction to the Roman tongue that refuses to die You can download it from the Electronic Telegraph archives at http.//www.telegraph.co uk

Spanish: Cuidado! Yes, look out for the University of Missouri s Basic Spanish for the Virtual Student course More than 50 modules have been prepared by profs for a top-notch course There s even a Web-phone area. Check it out at www umr.edu/~amigos/Virtual/

Swedish: Still under construction, but *Net Guide Magazine* calls this site one of the 1 003 Best Free Things on the Web The course outline appears to be quite comprehensive and can be viewed at http.//www.sas.upenn.edu/~anuban/swedish html

Welsh: No leeks or dragons at Mark Nodine's site. Indeed to goodness, it's still under construction The emphasis is in developing conversational skills rather than understanding literary Welsh Check it out at http.//www cs brown edu/fun/welsh/Welsh.html ◆

BC CDROMS

Continued from page **12**

audio or text) with key figures the Reference Room helps you find specific information, and the Hallways and Verandah contain pictures audio clips and other tidbits of pertinent information

Actors present the lives and views of Louis Riel Sir John A Macdonald and other historical figures Canadian historians provide their perspectives on the events

Using a special feature called The Journal students can compile their own collection of material for projects or multimedia reports A teacher's guide is included

Making History was produced by Vancouver s Monro Multimedia with the National Film Board and in partnership with the Department of Canadian Heritage In May the disc won Best Interface Design in the 1997 International Digital Media Awards beating out Microsoft s MSN

Paint 'n' Play

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Paint n Play is the dream of producer Rex Bromfield a director of feature films and children s TV who says he saw a need for good children s programs Much of the work and testing of the software was done on the Internet and utilized the contributions of talented single mothers

Paint n Play is the first product from his company Funny Face Softbook Company Ltd

June Campbell is the owner of Nightcats Multimedia Productions. You can reach her by e-mail at campbelj@istar ca or by phoning 604-980-3219 during business hours ◆

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Multimedia Encyclopedias: A Matter of Trust

by Cliff Cunningham

World Book 1997 Multimedia Encyclopedia, from IBM for Win95/3.1 Price $60

Encarta 97 Encyclopedia, from Microsoft, for Win95 Price $60

Grolier Multimedia Encyclopedia, from Grolier for Win95/3.1 Price $50

Compton's Interactive Encyclopedia, 1997 Edition from Compton's Home Library for Win95/3.1 Price $45

Merriam Webster's Collegiate Dictionary, Deluxe Audio Edition from Merriam Webster, for Win95/3.1 and Mac Price $49.95

As we come to rely ever more heavily on multimedia encyclopedias for basic information and as teaching tools the issue of trust comes to the fore. How reliable is the data we see on the computer screen? With this as a guiding principle I delved into four encyclopedias and an online dictionary all of which incorporate various multimedia elements.

Both Compton's and Grolier come on a single CD-ROM while World Book and Encarta come on two discs. The dictionary I tested, Merriam Webster's Collegiate Dictionary, is also on a single disc. All four encyclopedias are newly revised 1997 releases. Britannica was not included because it is not a multimedia release.

The testing method I used was a simple one: take a subject in which I am an expert and analyze how well each of the four encyclopedias relayed useful, accurate and up-to-date information. The subject I chose is asteroids, the rocky objects that mostly orbit the Sun between the planets Mars and Jupiter. As television addicts also know thanks to a recent NBC asteroid movie and a National Geographic special, asteroids also hit Earth and were the likely cause of the dinosaur extinction.

I expected all the encyclopedias to be quite good but I was dismayed to learn otherwise.

Inconsistent

For consistency, Compton's gets a failing grade in the asteroid section. It claims that Ceres is 930 km in diameter (the value now believed to be fairly accurate) but in a section titled "Earth: Some facts about space" Ceres is listed at 1,023 km across (a figure that comes from 1979 data!). In the article about Juno it claims some 1,600 asteroids are known but the asteroid section says at least 3,000 have been catalogued. Both are outdated—6,000 would be a better figure.

While Compton's does include a Web site link for more information on asteroids, the entry itself is the briefest and least useful of the four encyclopedias. Other articles are similarly brief: the one on Giuseppe Piazzi, who in 1801 discovered the first asteroid, is less than 10 words!

Grave Mistakes

Incredibly the bibliography in the solar system article lists no books more recent than 1990 and it actually has the audacity to say the article was reviewed by an astronomer who has been dead since 1973! Dr Helen Hogg, Canada's most famous astronomer, is listed as living even though she died several years ago.

World Book is only a little better than Compton's. It too lists Hogg as living, although its entry on her life is much more complete. As for Ceres, it adopts a diameter in between the figures listed in Compton's: 970 km. The number of known asteroids is given the appropriate figure of 6,000 but it presents both theories for the origin of asteroids as equally likely. In fact one of the theories was discounted by most astronomers a century ago. Piazzi does not rate a separate article in World Book.

Especially disappointing from a multimedia standpoint is the fact that neither Compton's nor World Book contains any photographs of asteroids. Neither makes an attempt at incorporating anything but text and tables of data.

Another worrisome aspect of all the encyclopedias is that none of the "facts" are referenced. With the power of CD-ROMs it should be a simple matter to link every pertinent scientific fact to the source being used, thus allowing students or researchers to check out or quote the source.

Encarta is even worse than Compton's. While the bibliography in Compton's is outdated it is better than Encarta's which lists no books under astronomy more recent than 1988. Here we find that Ceres has ballooned

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to 1 030 km (100 km larger than the real figure) but even more annoying is the entry on Ceres which contains no data at all! It merely has a hyperlinked pointer to the asteroid article. This is especially curious as other asteroids have separate articles with brief information. Encarta is the only one of the four to have no mention at all of Piazzi, but its article on Hogg does include the fact she died in 1993.

Encarta's asteroid article does have a nice photo of the asteroid Ida, and its animated solar system exploration does a nice job of showing where the asteroid belt is located. Grolier also has a solar system animation but it is not nearly as well developed as Encarta's.

Even so Grolier makes better use of multimedia in its asteroid presentation. In addition to a color photo of Gaspra (Encarta's Ida shot is black and white) it has a montage showing Ida, Gaspra, a radar image of another asteroid, and links to other montages of comets and meteorites.

Counting Asteroid Hits

By doing a word search on "asteroid" I found the following hits in the four CD-ROMs: Compton's (35), Grolier (26), Encarta (25) and World Book (10). Grolier wins in depth of knowledge with such esoteric subjects as the three-body problem involving Trojan asteroids actually rating a separate article. Unfortunately they give an incorrect date for the discovery of the first Trojan asteroid. That, and Grolier's figure of 785 km for the diameter of Ceres, show it cannot be trusted on its facts.

This is especially strange as it provides a bibliography of four asteroid books, including *Introduction to Asteroids*, which I authored. In my book, Ceres is stated as having a diame-

Continued on page **34**

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Vancouver Web Site Wins Seven Canadian Internet Awards

BY JUNE CAMPBELL

Suite 101 from Vancouver's i5ive Communications walked away with seven prizes at the Canadian Internet Awards event held in June. Suite 101 was awarded Best Internet Resource—Non Technical, Best Tools and Utilities, Best Service to the Public, Best Development Team on Collaboration, Best Project or Pilot, Best Online Service and Best Contribution to New Standards and Services.

The Canadian Internet Awards are a spin-off of Net 97, the Internet conference held in Halifax in June. Prior to the conference, Net surfers were invited to nominate Canadian sites; voting was done by email. The people behind Suite 101 were astonished when they received a message advising them that they had received nomination in 11 categories and that they "should consider sending someone to the conference because you're going to be taking home too many awards to be mailed!"

Since the conference Suite 101 has also been rated Dr Webster's Web Site of the Day and was Yahoo Canada's Site of the Week, July 11-18.

According to Suite 101's Dean Minamimaye, who holds the title of special projects programmer/designer and web promotions (dean@suite101.com), Suite 101 is an excellent communication concept because it first builds community and then builds a Web site around that community. "Suite 101 is unique in that we have recruited over 100 editors from all over the world to help us help everyone else. Each editor is an expert in his/her field. He/she lists the best sites he/she has found and writes a weekly article as well as moderating a discussion. Managing editors oversee the sites for each section and copy editors keep a watchful eye for typos and spelling errors.

"We believe that people will come to our site because we have real people finding quality links and not a bot returning 100 000's of URLs for a search. If you have a question, usually one of our editors will be able to find the answer you are looking for. We think that this service gives users a safe haven from the chaos of the Web. Our service is free and everyday more and more people are asking to become an editor for a topic on which they are an expert."

Travellers or others who access the Net through Internet cafes will appreciate another unique feature which is available free to registered users. Users enter their bookmarks, telephone numbers, appointments and schedules in a password protected area. A personal virtual office is then accessible from any Internet enabled location.

Suite 101, which was developed by a six-person team, went online approximately one year ago. A newly revised version offering both frames and no frames debuts Aug 6.

To experience Suite 101 go to http://www.suite101.com. For more information on i5ive Communications call 604-682-1400.

June Campbell is the owner of Nightcats Multimedia Productions. You can reach her by email at campbel@istar.ca or by phoning 604-980-3219 during business hours. ◆

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Back to School Basics

Multimedia Systems for Student Size Budgets

by Lynn Greiner and Sandra Mingall

It's almost time to head back to school and for students of all ages thoughts must turn to the tools of the "trade." And more frequently computing is taking its place next to the traditional readin', writin' and 'rithmetic as a basic skill.

Besides being cool toys, computers can be invaluable for learning. In conjunction with an online service (the Internet or a commercial service such as CompuServe or America Online) your silicon pal can become a window to the wisdom—and stupidity—of the entire world.

We took a look at a litter of relatively inexpensive machines to gauge their suitability for students. We looked at the machine itself, its software bundle and its connectivity to see if the package offered is one that would enhance the learning process as well as provide a bit of fun. Bear in mind that the best choice depends not only on the student's needs but on the systems used or recommended by their school. If you have to hand in assignments based on Apple software the sexiest PC on the planet will be totally useless!

We stuck to desktop systems for this roundup although some universities are actually now requiring laptops. (Check *CP!* in a couple of months for a peek at the cream of the current mobile crop.) Here's what we found (in alphabetical order by manufacturer except for the last two). All systems (except the Apple) come with Windows 95 preinstalled.

AST Adventure 430

This machine incorporates the following features: 166 MHz Intel Pentium Processor, 2 GB hard drive, 8x CD-ROM drive, 16 MB RAM, 16-bit audio with surround sound, 33.6Kbps modem and 15-inch monitor. It has a Canadian street price of $1,902.

Bundled software includes Corel WordPerfect 7 Suite, Intuit Quicken SE, and Mindscape Complete Reference Library plus an entertainment trivia game by Berkeley Systems called You Don't Know Jack!, Microsoft Internet Explorer and start up software from America Online, CompuServe, Prodigy and AT&T WorldNet.

WordPerfect and the Complete Reference Library are especially useful for high school students. The reference title incorporates 10 online books including a dictionary, almanac, book of quotations and a legal dictionary. On the downside the material is heavy on American content.

Setup was accomplished in approximately 15 minutes. Connections were clearly labeled on the back of the CPU. The keyboard has a comfortable touch—important if students are spending hours churning out a term paper. There is little documentation provided for new users. The manual is rather cryptic and mainly presents the how-tos of installing boards, adding system memory and setting jumpers. The hardware, though, was reliable in performance. Graphics are crisp and sound very respectable.

Compaq Presario 2120

This is a very basic machine that tucks all of its components into a small flat black box (the only desktop model we saw): 8x CD-ROM drive, speakers and so forth. It has a 150 MHz 586 processor with MediaGX, a 2 GB hard drive, 24 MB RAM and a 33.6Kbps fax modem. Performance is perky. The price is very reasonable at $1,990.

It was simple to assemble—the hardest part was opening the boxes—and comes with a 14-inch monitor. The software bundle is a bit slim, offering Compton's Interactive Encyclopedia, Microsoft Works 4.0, Quicken SE, a trial version of Sidekick 95 and a couple of games. Online access is provided through Netscape Navigator, a signup for Juno Internet email and the ever-present America Online.

At press time Compaq announced that this model will be phased out over the next few months in favor of a slightly stripped-down version (less memory, smaller hard drive, faster processor) costing several hundred of dollars less.

Hewlett Packard Pavilion 7360

A pricier system than most we looked at, this lists for just over $3,200. It's also loaded. It has a 200 MHz Pentium processor with MMX, 32 MB RAM, a 3.8 GB hard drive, 16x CD-ROM, 33.6Kbps DSVD data/fax/voice modem and a pair of Altec Lansing speakers that attach like ears to HP's multimedia monitors. As well as the standard ports, it has a USB (universal serial bus) connection, the future standard (according to the recently announced PC 98 spec.) for attaching everything from monitors and keyboards to scanners.

Its keyboard has a full set of multimedia

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controls as well as the usual typing keys You can adjust speaker volume use the telephony features and even suspend the system by simply tapping one of these special keys

The system functioned well but seemed quite noisy The hard drive rattled when active (a phenomenon I ve noticed with several of the very large hard drives) and the CD-ROM drive revved up like a jet

The software bundle is an eclectic mix of kids educational titles such as Virgil Reality Oregon Trail (a simulation game) Logic Quest Great Math Adventure Great Word Adventure and Tuneland and titles for adults or older students such as Compton s Interactive Encyclopedia Arttrageous an HP financial calculator Quicken 5E, Intuit Market Place Tripmaker 97 SE and Microsoft Works There are also several games (including Whiplash and MechWarrior 2) the Billboard Music Guide the Blockbuster Guide to Movies & Videos telephony software and when you register your system Sim City 2000 Connectivity is supplied through signups for America Online Prodigy CompuServe and Internet providers Netcom and AT&T WorldNet

HP has a simple interface called Personal Page that novices will enjoy (it talks to you as well as displaying icons and text) but experienced users will quickly abandon in favor of the normal Windows 95 shell

IBM Aptiva E32

The Aptiva E32 is a $2 999 166 MHz Pentium with a 3 2 GB hard drive 32 MB RAM 16x CD-ROM drive 33 6Kbps data/fax modem microphone and stand and 15-inch monitor Its performance is brisk

Its software bundle will mainly profit the older student since it only includes productivity applications You get Lotus Word Pro 96 (IBM owns Lotus remember) Lotus 1 2-3 Release 5 Lotus Organizer 2 1 Internet connectivity through Netscape Navigator Internet Explorer and a signup for AT&T WorldNet signups for CompuServe America Online and IBM Anti-Virus and PC Doctor for Windows

For gamers it actually has a DOS-mode games setting you can click on to restart the system with the requisite resources

IPC CS MP-5166

This model offers a 200 MHz Intel Pentium Processor with MMX, 2 1 GB hard drive 16x CD-ROM drive 32 MB RAM 32-bit audio 33 6Kbps modem 14-inch monitor Microsoft Sidewinder Gamepad and speaker phone The Canadian street price for this system is $2 397

The bundle of software is small but useful for students and includes Microsoft Works Encarta 97 and the Magic School Bus Explores the Solar System as well as several games

NEC Ready 9710

This is a 166 MHz Pentium with MMX, 16 MB RAM a 2 1 GB hard drive, and a 16x CD-ROM drive It has a 3D graphics card with 2 MB video memory and MPEG decoder and a 33 6Kbps data/fax/voice modem with software for fax and voice mail Like other Ready machines we've tried it s a solid performer

Continued on page **23**

Simpler Systems for Shrinking School Budgets

BY MEGAN JOHNSTON

The point at which smaller budgets and rising computer needs intersect has created a market for educational hardware manufacturers In the Lower Mainland, two companies are marketing stripped-down, portable low-cost notebook-like computers to the educational market Both products can interface with desktop PCs and Macs, and are tough enough to be taken out on field trips And, while not as sexy as some of their south-of-the-border peers—Apple s voluptuous eMate for example—these simple systems appear to fill a need while not emptying the coffers

Laser PC5

Tandex Technologies (formerly VTech) in Richmond distributes the PC5 which has no moving parts—with the exception of the keyboard—and weighs less than 1 kg (2 lb) It has an eight-line by 80-column LCD screen that can be bumped up to four by 40 for special needs and visually impaired students Also for handicapped users or novice typists the full-size keyboard has optional "sticky" keys, allowing two-key commands to be activated one key at a time The built in software includes a word processor spell checker, spreadsheet, database telephone directory, calculator, typing tutorial, and utilities It comes standard with an interface cable and software for transferring data to a desktop PC It can store the equivalent of 100 pages of text Optional modules for the proprietary expansion port include a modem thesaurus, and in September, a text-to-speech module The typical life expectancy for two AA alkaline batteries is 30 hours and eight for the rechargeable nickel metal hydride pack An optional docking station can be used to store and recharge multiple units.

DreamWriter

Maple Ridge-based NTS Computer Systems has created a similar line of computers as well as a series of peripherals with IrDa-standard infrared connectivity The line includes the DreamWriter IR (infrared) and the DreamWriter Flip computers; Roll-A Lab docking stations for storing and recharging multiple units, a 3 5-inch 1 44 MB external floppy disk drive with infrared capability the DreamJet adapter which allows non IrDa peripherals to communicate using infrared, and the DreamLink E-mail Server which provides wireless email communication within a school and via the Internet through an infrared port in each classroom

Like the Laser PC5 the DreamWriter computers are small—weighing only 1 12 kg (2 5 lb)—and simple and include word processing and spell checking applications with thesaurus and grammar check, organizer scheduler typing tutor, calculator They can store 120 pages of text, which can be transferred wirelessly to a PC or saved to its standard PC MCIA memory card

Contact the companies for educational prices.

Tandex, 10-3850 Jacombi Rd. Tel 276-0588
NTS Tel 800-663 7163, or 604-465 1040
Email nts@nts dreamwriter com
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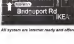

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Back to School

continued from page 21

and a reasonable value at about $2,500 including 14-inch monitor.

The titles in the software bundle are primarily useful for older students. You get Microsoft Works 4.0, Microsoft Publisher, Microsoft Encarta 96 and Microsoft Money, plus some entertainment titles: Blockbuster Guide to Movies & Videos and Pod. For connectivity there's America Online, CompuServe, AT&T WorldNet signup, WebWay connection Manager, Internet Explorer and Starfish Internet Utilities. McAfee VirusScan 95 and WebScan, The Family Doctor, VoiceView TalkShop and a clever MMX-enabled history called Timetables of Technology round out the package.

Packard Bell 640

The 640 incorporates the following features: 166 MHz Intel Pentium Processor, 1.6 GB hard drive, 16x CD-ROM drive, 16 MB RAM, 16-bit audio with surround sound, 33.6 Kbps modem and monitor. The Canadian street price for this system is $2,099.

Bundled software includes Corel WordPerfect 7, Microsoft Works 4.0a and startup software from America Online, Prodigy and ISP Sprynet. CommCentral software—which features answering machine, fax and voice mail capabilities and a demo [illegible] Internet Phone [illegible] VocalTec.

New users will likely enjoy the graphical user interface Packard Bell Navigator created to guide users around their computer—something like the ill-fated Microsoft Bob. After a while though, computer-savvy students will probably prefer to interface directly with the Windows desktop.

Documentation is clear and easy to read. There's also a program that allows users to connect to Packard Bell hardware technical support via modem. Technicians can then see your system and walk you through solutions to problems. Direct connections also exist to a Packard Bell BBS and online support service.

Prepare to spend a bit of time setting up this system. It took us about 35 minutes. Since the audio speakers need to be mounted on the side of the screen, you'll need a screw driver and some patience to figure this one out. Connections are color-coded to reduce guessing on what goes where.

The keyboard is rather noisy and not that well padded. Graphics are clear and the side-mounted speakers deliver excellent sound. The CPU itself is rather noisy—we preferred to move it out of the way under a table to reduce the noise factor.

Apple Computer

Apple was not able to supply us with a machine in order to conduct a hands-on review. The company did however provide us with product specs on its student/educator model, the Power Macintosh 6500/225. Features include a 225 MHz PowerPC 603e RISC processor, 16-bit CD-quality stereo sound with SRS surround sound, a 33.6Kbps modem with telephony, ATI RAGE II 64-bit graphics and multimedia accelerator chip, a

Continued on page 26

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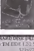

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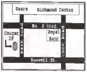

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ATI 3D ProTurbo/PC2V 4M/8M	205/275
ATI all-in wonder 2M/4M	320/345
Diamond 3D 2M/4M DRAM	102/116
Diamond 3D 2M/4M VRAM	155/210
Matrox Myst 3D 2M/4M SRAM	125/157
Matrox Mill 3D 2M/4M WRAM	185/245
Matrox Mil II 4M/8M (Retail)	315/425

Monitor

Proview 14/15/17	205/285/550
AcerView 15 54e/56e	325/375
AcerView 17 76ie/78ie	640/670
ADI 15 4V/17 5V/17 5G	430/705/900
Sony 15 100SX/100SF	533/610
Panasonic S15/P15/PM15	394/431/478
Panasonic S17/P17/PM17	783/941/834
Samsung 15 500S/500B	400/430
Samsung 17 700S/700B	765/795
NEC 15 M500/XV15+	525/550
NEC 17 M700/XV17+	1070/975
ViewSonic 15GA/17GA	548/884

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K5 / 6X86 Systems

K5 75 [illegible]
256K PB cache
8MB RAM [illegible] MB
[illegible]
1.44MB [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Mouseman
[illegible]

$777/$819/$849/$888

Pentium Systems

Intel Pentium 120/133/150/166 MHz CPU
256K Pipeline Burst Cache
8MB RAM (exp 128MB)
[illegible] EIDE Hard Drive
1.44MB Floppy Drive
PCI Video Card w/1M Memory (exp to 2M)
14" NI LR SVGA [illegible]
Mini-tower Case w/230W PS
104 Key [illegible] Keyboard
Logitech MI Mouseman
[illegible]

$888/$909/$939/$969

Pentium 200/mmx Systems

Intel Pentium 200 MMX 166/200/233 MHz CPU
512K Pipe-line Burst Cache
16MB E.D.O. RAM (exp. 128MB)
2.0GB EIDE Hard Drive
1.44MB Floppy Drive
ATI Mach64 Video Card w/1M DRAM
15" NI LR SVGA Proview Monitor
Mini-tower Case w/230W PS
104 Win95 Enhanced Keyboard
Logitech MI Mouseman
One month free internet access

$1339/$1289/$1389/$1599

Pentium Pro/PII Systems

Intel Pentium Pro180/200/PII 233/266 MHz CPU
256K/PII 512K Pipe-line Burst Cache
16MB E.D.O. RAM
[illegible] EIDE Hard Drive
1.44MB Floppy Drive
ATI Mach64 Video Card w/2M DRAM
15" NI LR SVGA Proview Monitor
Mid-Tower Case w/230W PS
104 Win95 Enhanced Keyboard
Logitech MI Mouseman
One month free internet access

$1599/1839/2299/2499

Upgrade Options

8MB to 16MB	$40
16MB to 32MB	$75
1.6GB→2.1GB→[illegible] HD	$20/$[illegible]
2.5GB→3.1GB→4.3GB HD	$40/$[illegible]
14" to 15" monitor	$90
Use Gigabyte Asus M/B	$40/$[illegible]
Multimedia 12/16/24 X Kit	$[illegible]
Including 12X/16X/24X CD-ROM	
16 Bit Full Duplex [illegible] Card	
Multimedia Stereo Speakers	
[illegible]	
Internet Ready upgrade	
Internet Package	$2[illegible]
33.6 Fax Modem	$[illegible]

Pentium [illegible] optional [illegible]

Memory

[illegible] pin 1M/4M	$7/23
72 pin 4M	$23
72 pin 8M	$40
72 pin 16M	$75
72 pin 32M	$159
72 pin 4M EDO	$23
72 pin 8M EDO	$40
72 pin 16M EDO	$75
72 pin 32M EDO	$159
168p 16M/32M SDRAM	$109/195

Motherboard with CPU

Pentium 120/133 MHz	$219/239
Pentium 150/166 MHz	$269/299
MMX 166/200/233	$419/519/719
Pentium200/Pro200	$459/899
PentiumII 233/266 MHz	$1349/1549
6x86 P150+/166+/200+	$179/209/259
AMD K5 75/100	$139/169
AMD K6 166/200	$399/469

Hard Drives

1.6GB EIDE Hard Drive	$229
2.0GB EIDE Hard Drive	$249
2.5GB EIDE Hard Drive	$279
3.1GB EIDE Hard Drive	$319
4.3/6.4GB EIDE HD	$349/$529/$549
2.1GB SCSI 2 Hard Drive	$419
3.1GB SCSI 2 Hard Drive	$489
4.3GB SCSI 2 Hard Drive	$1249

Printers / Scanner

Canon BJ 30/240C/4200C	$279/$209/299
Canon BJ 4100/4550	$259/559
HP DeskJet 400C/692C	$249/$369
HP DeskJet 820C/870C	$369/$529
HP LaserJet 6L/5N	$529/1979
HP LaserJet 5/5M/5Si	$1679/2359/3599
HP LaserJet 4V/4M+	$2489/$2610
HP 4MV/1600C	$3819/$1819
HP 6P/6MP	$949/$1179
Brother HL 720 600dpi 6ppm	$369
Brother HL 730 600dpi 6ppm	$439
Brother HL 760 1200dpi 6ppm	$539
Epson Stylus 400/600/800	$279/$389/$539
Lexmark 2030/2050/2070	$280/$335/$399
HP ScanJet 4S/5P/4C	$269/$499/$999
UMax s6e/Hc full	$395/$795

HD Controllers

VLB EIDE Controller	$27
Adaptec 1505/1522 SCSI Ctrl	$75/$90
Adaptec 2940 SCSI Ctrl	$235
Adaptec 2940W SCSI Ctrl	$269
Adaptec 3940 SCSI Ctrl	$509

Tape/Zip/Jaz Drives

Zip Drive 100MB Int/Ext	$149/$189
Iomega Jaz Drive 1G Int/Ext.	$399/$525
Zip 100MB/Jaz 1GB Disk	$17/$119
Colorado T1000 800MB Int/Ext.	$159/$199
Colorado T3000 Int/Ext	$259/$309
Iomega Ditto 2.0GB Int/Ext	$199/$249

Monitors

Proview 14" 15" 17"	$209/$299/$559
Daytek 14" 15" 17"	$235/$309/$589
Acer 14" 15" 17"	$249/$349/$659
MAG 15" DJ530	$469/$469
MAG 17" DJ700/700T	$795/$859
ADI 4V 15" 5V 17"	$439/709
ViewSonic 15"GS 17"GS	$489/$709
NEC 15" E500/M500	$479/$519
NEC 17XV/P750	$969/$1229
NEC 17" M700	$1029
SONY 100Sx 100SF	$519/$499
SONY 200Sx 200SF/SF2T	$889/$1069/$1299

Video Cards

Cirrus Logic VLB PCI 1M	$59/$28
S3 Trio 64 1M/2M D	$39/$55
S3 Virge 3D 2M/4M	$55/$85
ATI Mach 64 1M/2M D	$61/$75
ATI 3D Xpression 2M EDO RAM	$79
ATI 3D+ 2M/4M SDRAM	$129/$149
ATI 3D+ PC/TV 2M/4M SDRAM	$139/$169
ATI 3D+ ProTurbo PC/TV 4M/8M	$199/$269
ATI Mach 64 2M/4M V	$209/$299
ATI TV Tuner Card/All-in-one 2M	$129/$309
Diamond Stl 64 1M/2M D	$85/$99
Diamond Stl 64 2M/4M V	$199/$259
Diamond 3D 2M EDO RAM	$99
Diamond Monster 3D 4M EDO	$289
Matrox Millenia 2M/4M W	$189/$249
Matrox Mystique 3D 2M/4M	$129/$159
Millenia TV Tuner/Video Capture	$169/$399

Multimedia/CD Writer

16 Bit PnP Sound Card	$29
Sound Blaster 16 PnP/32PnP	$65/$[illegible]
Sound Blaster 32/64 AWE	$115/$179
Panasonic CD-ROM 12x/24x	$95/$149
Mitsumi CD-ROM 12x/16x	$95/$109
Toshiba CD-ROM 12x/16x	$99/$119
Sony CD-ROM 12x/16x	$99/$119
Pioneer 12x SCSI CD-ROM	$139
NEC 6x4 CD Changer	$179
HP Surestore 6020i CD-Writer	$589
Sony 926S CD-Writer + software	$429/499
Blank recordable CD	$6

Modems

33.6/56 Kbps Int. Fax/Data	$55/129
33.6/56 Kbps Int. Voice/Fax/Data	$75/149
Supra 33.6 Int. Voice/Fax/Data	$89
USR 33.6/56K Int. Fax/Data.	$125/$209
USR 33.6/56K Int. Voice	$135/$229
33.6 Ext Voice/Fax/Data.	$115
PCMCIA 28.8/33.6k Fax/Data.	$189/229

Cases/Keyboards/Mouses

104 Windows 95 keyboard	$18
Fujitsu 8725/4725	$30/$55
Logitech MouseMan Serial	$33
Logitech MouseMan Bus	$89
13"/15" Tower Case w/230W	$39/$49
19"/25" Tower Case w/230W	$59/$95

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Limited quantity. All prices are cash discount and subject to change without prior notice.
All systems have one year Parts and three years labor limited warranty.

Back to School

Continued from page **23**

3.0 GB hard-disk drive 12x CD-ROM drive and 32 MB RAM The machine comes with a 15-inch monitor Canadian street price for this system is $2,800

The preinstalled software bundle provides many useful titles for the elementary and junior-high set, including Mayo Clinic Family Health by IVI Publishing Grolier's Multimedia Encyclopedia 3D Atlas by Electronic Arts Amazing Writing Machine by Broderbund, Thinkin Things 3 by Edmark, American Heritage Dictionary by Softkey Where in the USA is Carmen Sandiego by Broderbund Kid Pix by Broderbund and Clarisworks 4.0 Several games a Web-page authoring tool, Internet connection set, and Internet blocking software round out Apple's comprehensive software bundle

Samtack Sequoia PT-S200

Samtack was also unable to supply a machine for review It did provide us with product specs on its student model the Sequoia PT-S200 Features include a 200 MHz processor Creative Labs 3D sound card, a 33.6Kbps modem with voice a 2.5 GB hard-disk drive 16x CD-ROM drive and 32 MB EDO RAM It comes with a 15-inch Imago monitor and 80 Watt speakers This model's $1 999 price tag places it well within the student market.

The package includes MS Internet Explorer and Net Meeting, as well as some games

Editor's Choice awards

For Editor's Choice we've selected the NEC Ready Its software bundle although most suitable for older students, contains a good mix, and the system itself is powerful and nicely configured. Combine that with good connectivity and a reasonable price, and you've got a winner.

For more information contact:

Apple 800 263-3394 http://www.apple.ca
AST 800-876-4278 http://www.ast.com
Compaq 800-567 1616
http://www.compaq.ca
Hewlett Packard 905-206-4725
http://www.hp.com
IBM 800 267-9077 ext. 1280
http://www.can.ibm.com
IPC 888-446-4472 http://www.ipc.ca
NEC 800-632-4554 http://www.nec.com
Packard Bell 905 564 1122
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Pentium 75-166	$99
486 DX2 50 M/b & CPU	$89
Pentium 66 M/b & CPU	$139

the King of Accessories

2MB PCI Video Card	$59	Mice	$9.95
Joysticks	fr $9.95	Sound Cards	$29
Game Pads	fr $9.95	1MB ISA Video Cards	$39
Keyboards	$19.95	New Software Just Arrived	

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Used Computers an Option for Budget Conscious

There's no shortage of used, refurbished and end-of-line computers and accessories which is good news for students who are heading back to school this fall on a tight budget. The rapid evolution of computer technology has created an unprecedented supply of used computers, as more individuals and companies sell, trade or donate old models. Some outlets specialize in brand-name products, but many outlets sell a myriad of different brand names and accessories.

The following is a sampling of stores in the Lower Mainland that sell used computers and accessories.

B&C Computers
6919 Russell Ave., Burnaby
Phone 437 6919 Specialty: PCs, some Macs
Benchmark Computers
2627 Kingsway Vancouver
Phone: 451 5333
Specialty PCs and some Mac accessories
Canadian PC Exchange
Phone 473 7055
Computer Clearance Warehouse
3083 Grandview Highway Vancouver
Phone 437 5551 Specialty: PCs and Macs
Computer Lovers Centre
Unit #2 555 Clarke Road Coquitlam
Phone 931-8368
Specialty: PCs, some Mac parts
Computers N Computers
3474 W Broadway Vancouver
Phone 733 5363 Specialty PCs, Macs
Encore Computers
119 Lonsdale Ave North Vancouver
Phone 990-0547 Specialty PCs, Macs
Games Lovers Library
140 9020 Capstan Way Richmond
Phone: 270-7898
Specialty: PCs some Mac parts
Golden Top Computer
10269-128th St Surrey
Phone 581-4698 Specialty PCs, some Macs
J & G Consignment Warehouse
1919 W 4th Ave. Vancouver
Phone 733-9166 Specialty PCs, Macs
Jesco Audio/Video Ltd.
1232 W Broadway Vancouver
Phone: 733-4409 Specialty PCs
New Web Computers
8-2900 Smith St, Richmond
Phone 276-2508
Specialty: Macs, PCs
PC Galore Consignment Ltd
2744 W 4th Ave Vancouver
Phone 732 7816 Specialty: PCs, Macs
106-9780 Cambie Rd Richmond
Phone 303-7331 Specialty: PCs, Macs
PC People Sales and Service
3399 Kingsway Vancouver
Phone 439-2588 Specialty: PCs
PC Spectrum
230-2182 W 12th., Vancouver
Phone 879 7815 Specialty: PCs
POL Electronics
8452 Granville St. Vancouver
Phone 264-8808 Specialty: PCs
Palsons
458 W Broadway Vancouver
Phone 879-0631 Specialty PCs
PC Place
Unit #5-8145 130th St Surrey
Phone 572-8324 Specialty: PCs, Macs
Rawn's Buy & Sell Network
5684 Dorset, Burnaby
Phone 878-1181 434-8500
Reality Computer Brokers
307 130 E 15th Ave, Vancouver
Phone 872-4911
UBC Surplus Equipment
Recycling Facility (SERF)
2352 Health Science Mall
Phone 822 2813 Specialty: All types

United Computers
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IBM New Aptiva "S"
P166MMX 32M/3.1G/15" $3,600
P200MMX 32M/4.2G/17" $4,725
New Intellistation
ZPro200 64M/4.5G/UW SCSI/16x/NT4 $6,220

Intel Pentium-133
✓Pentium-133MHz CPU
✓Triton III Chipset/256k Pipeline Cache
✓8MB EDO 72pin RAM
✓1.2 GB EIDE (mode4) Hard Drive
✓PCI SVGA 1MB Video Card (exp. to 2MB)
✓1.44 MB 3.5" Floppy Drive
✓14" NI L/R SVGA Monitor
✓Mid-Tower Case / 230 W Power
✓104 Key Win95 Keyboard
✓Qtronix Lynx90 2B Mouse
Sale Price: $1,015
#P120 / P150 / P166 / P200
$975 / 1045 / 1105 / 1175
#Pentium166 MMX $1,205
#Pentium200 MMX $1,485
One Month Free Internet with New Systems

Intel Pentium-166
✓Pentium-166MHz CPU
✓Triton III Chipset/256k Pipeline Cache
✓16MB EDO 72pin RAM
✓1.6 GB EIDE (mode4) Hard Drive
✓PCI SVGA 2MB Video Card
✓1.44 MB 3.5" Floppy Drive
✓15" NI L/R SVGA Monitor
✓Mid-Tower Case / 230 W Power
✓12x EIDE CD-ROM Drive
✓Sound Blaster 16 PnP
✓60W Stereo Speaker
✓104 Key Win95 Keyboard
✓MS Ver2 / Logitech Mouse
Sale Price: $1,455
#P133 / P150 / P200 / 166MMX / 200MMX
$1365 / 1395 / 1535 / 1595 / 1795
#AMD K6 166 MMX $Call
#AMD K6 200 MMX $Call

Intel Pentium Pro 180
✓Pentium Pro-180MHz CPU 256k L2C
✓Intel 440FX Chipset Motherboard
✓32MB EDO 72pin RAM
✓3.0 GB EIDE (mode4) Hard Drive
✓ATI PCI 3D 2MB Video Card
✓1.44 MB 3.5" Floppy Drive
✓Mid Tower Case w / 230 Power
✓104 Key Win95 Keyboard
✓MS Ver2 / Logitech Mouse
Sale Price: $1,515
#Pentium Pro200 . $1,695

Pentium II System
✓Intel PD440FX ATX Motherboard
✓With Same Components as above
#Pentium II 233 : $2,165
#Pentium II 200 . $2,365

Upgrade Options:
☐14"⇒15" / 17" Monitor $80 / 300
☐33.6 Fax/Data/Voice Modem $90
☐8MB⇒16MB / 32MB EDO RAM $59 / 170
☐1.2⇒1.6 / 2.0 / 2.5 / 3.1GB $20 / [illegible] / [illegible] / 120
☐12x / 16x CD-ROM Driver $110 / 130
☐Microsoft Home CD pack $80
☐Windows95 / [illegible] Office97 $125 / 420

Special:
#MITSUBISHI 17" 87TXV .25 Trinitron$[illegible]
#JTS 3GB HD 5400rpm 3yr warranty $[illegible]
#Matrox Mystique 2M 3D Video Card $120
#240W Subwoofer Speaker System $80

Storage Devices
Hard Drives:
WD 1.6 / 2.1 GB $246 / 270
WD 2.5/3.1/4.3 GB $285/315/450
WD 2.1/4.3 GB U SCSI $720 / 1070
Quantum 1.2 / 2.1GB $225 / 270
Quantum 2.5 / 3.2GB $285 / 315
Quantum 1.2 / 2.1GB SCSI $315 [illegible]
Maxtor 1.6/2.0/5.1GB $240/270/590
Seagate 3.3 / 6.0GB $366 / 625
Seagate 2.1/2 1GB UltraSCSI $[illegible] [illegible]
Seagate 4.3/4 5GB USCSI $1110/1080
Backup / JAZ / ZIP Drivers
Colorado T1000 int./ext. $180 / [illegible]
Colorado T2000 int./ext. $200 / 250
Ditto 2GB int./ext. $206 / 245
ZIP 100MB Drive Paral/SCSI $196
JAZ 1GB SCSI Int / ext. $400 / [illegible]
SCSI Controller
Adaptec 2930 / 2940 $190 / [illegible]
Adaptec 2940U / 2940UW $[illegible] / [illegible]
Adaptec 3940U / 3940 UW $[illegible]/[illegible]

Networks
Powercom ISA BNC Network Card $38
Powercom PCI BNC Network Card $45
3COM PC/3C900 / 509 $[illegible] / 95
3COM PC/3C900 Comb $[illegible]
Intel Pro10+ PCI 10BT $[illegible]

Notebooks
IBM ThinkPad:
365XD P133/8M/1.35G/11.3DSTN/6X $2[illegible]
365XD P133/8M/1.35G/11.3TFT/6x $3[illegible]
380D P150MMX/16M/2.1G/12.1TFT/8x $[illegible]
TOSHIBA:
220CDS P133/16M/1.3G/11 3DSTN/10x $2700
440CDT P133MMX/16M/1.3G/11.3TFT/10x $4680
520CDT P166MMX/32M/2.1G/12.1TFT/10x $6180
740CDT P166MMX/16M/2.1G/12.1TFT/10x $7760
NEC:
2500CD P133/16M/1G/12.1DSTN $2400
2500CD P133/16M/1.4G/12.1DSTN/10x $2[illegible]
[illegible] P150/16M/2.1G/12.1TFT/10x $[illegible]
ACER:
[illegible] P100/8M/810M/10.4DSTN $1[illegible]
373 P133/16M/1.08G $3615
SCEPTRE:
3000 P133/16M/1.08G/11.3DSTN $2200

Modems
Powercom 33.6 Int Voice (to 56k) $[illegible]
Cardinal 33.6 Int Fax/Modem $120
Cardinal 33.6 Int Voice/Fax/Data $170
Supra 56K PnP w/Voice $208
GVC 33.6 PCMCIA Fax/Modem $205
GVC 56K Voice Int / ext. $196 / 220
USR 33.6 Int/Voice $185 / 196
USR 56K int./ext. $205 / 270

CPU/RAM/M-Board
Intel P120/P133/P150 $[illegible] / [illegible] / 216
Intel P166/P200 $[illegible] / [illegible]
Intel MMX 166/200/233 $370/435/[illegible]
Intel Pentium Pro 180 / 200 $466 / [illegible]
Intel Pentium II 233 / 266 $[illegible] / 1135
AMD K6 166 / 200 (MMX) $[illegible] / [illegible]
Cyrix 6x150+/166+/200+ $115/130/185
72 pin 4M/8M/16M EDO $30 / [illegible] / [illegible]
72 pin 32M EDO $170
Intel VX w/256K PBC MMX $113
Intel TX w/512K PBC MMX $140
GA586 VX / HX 512K PBC $186 / 186
GA586 TX 512K PBC $196
ASUS T2P4 HX 512K PBC $[illegible]
ASUS 97TX 512K PBC $219
ASUS P6NP5 Pro $[illegible]
TYAN Tomcat II Dual-Pentium $290
Intel PD440FX ATX (P-II) $380

Printers / Scanner
Canon BJ30/BJC70 Portable $280/350
Canon BJC210/4200 Color $220 / [illegible]
HP 692C/820Cxi/870C $385/440/540
HP 6L / 6P 600dpi Laser $[illegible] / [illegible]
HP 5 / 4M Laser $1[illegible] / 2[illegible]
Epson Styl 400/600/800 $315/380/580
Lexmark [illegible] Color $[illegible]
Lexmark Optra E Laser $[illegible]
Brother HL-730DX Laser $[illegible]
HP 5P / 4C Color Scanner $[illegible]/[illegible]
Microtek E3 / E6 / E6Pro $[illegible]/[illegible]/[illegible]
U-Max [illegible] / S12 $[illegible]/715
CD-Writer
Creative 4x/2x $[illegible]
HP 6020 int./ ext. $[illegible] / 740
Yamaha [illegible] 6x/4x Int / ext. $[illegible] / [illegible]

Peripherals
Pioneer 12x EIDE/SCSI $110 / 185
Panasonic 16x / 24x EIDE $130 / 150
Acer 12x/16x/24x EIDE $105/135/145
Mini 13" / [illegible] 15" Tower $45 / 85
Full-Tower 19" / 26" $[illegible] / 95
17" ATX Tower $[illegible]
Windows 95 Keyboard (104Key) $22
Fujitsu 8725/4725 keyboard $30 / 56
MS Natura Keyboard $[illegible]
Microsoft Ver2/ Logitech Mouseman $32
Qtronix Pro 2B Mouse $15

Displays / Sound
14"/15"/17" Monitor $210 / [illegible] / [illegible]
Acer 15" / 17" NI L/R $[illegible] / [illegible]
MAG 15" DX15[illegible] / DX15T $[illegible] / [illegible]
MAG 17" DX1795 / 700T $815 / [illegible]
NEC 15" C500 / M500 $440 / 510
NEC 17" M700 / XV+ $[illegible] / [illegible]
Sceptre 17" .28 / .25 PnP $[illegible] / [illegible]
Sony 15" 100SX / 100SF $[illegible] / [illegible]
Sony 17" 200SX / 200SF $[illegible] / [illegible]
Panasonic P15 / P17 $470 / 1070
Viewsonic 17" G[illegible] / P6 $[illegible] / [illegible]
Viewsonic GT770 / PT770 $[illegible] / [illegible]
Optiquest V773 / V775 .26 $[illegible] / [illegible]
MITSUBISHI 17" 87TXV.25 $[illegible]
MITSUBISHI 17" 87TXM.25 $[illegible]
Cirrus Logic w/MPEG 1M/ 2M $45 / [illegible]
S3 Virge 3D w/4MB $75
ATI 3D 2M / 4M MPEG $[illegible] / 145
ATI 3D PC2TV 4M / 4M $150 / 185
ATI 3D Pro Turbo 4M / 4M $220 / 270
ATI All in Wonder 4M / 4M $[illegible] / [illegible]
Diamond STL3D 4M / 4M $145 / 180
Diamond STL3DV 4M / 4M $135 / 275
Mystique 4M / 4M $120 / 195
Millennium 4M / 4M $[illegible] / [illegible]
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What Took So Long?

Mac
Rant

David Rosen

Less than 18 months after Gil Amelio took charge of Apple the self-appointed turnaround specialist is out of a job. Amelio was the latest—and arguably the most inadequate—of Apple's recent leaders The real question is What took so long for the board to act?

Everyone agreed Amelio's formal management style clashed with Apple's corporate culture For example during an interview shortly after taking the helm at Apple Amelio explained that wearing a tie around Apple's headquarters campus helped set him apart Woohoo feel the excitement!

Besides the tie more significant warning signs soon became clear A book Amelio co-authored on corporate turnarounds published within days of his taking charge at Apple was a complete snooze-fest Long-time *MacRant* readers may recall our fascination with Amelio's corporate jet, paid for by Apple When the company's travel policy was revised about a year ago requiring coach travel on long-haul plane flights, engineers who have to shuttle back and forth between Apple's Cupertino headquarters and manufacturing plants in Asia and Europe quickly got the message This was the last straw for many long-time employees After all how many 12-hour flights in coach do you have to endure before thinking twice about coming into work in the morning?

Apple continued to stumble Its worldwide share of the personal-computer market dwindled and the company laid off thousands of workers many going to rivals and competitors. Apple also lost many senior managers and posted net losses of $1 6 billion over the six quarters As we went to press, Apple's stock had dipped to a 12-year low well under $14 Hardly inspiring.

Apple's board has already appointed a selection committee to find a new chief executive officer and a decision is expected in two months. Until a new chief executive is hired Fred Anderson, a highly regarded financial executive whom Amelio brought in to be Apple's chief financial officer will be in charge of the company

Apple's New Inkjets

Technology-wise Apple still continues to make great products This month, for example comes news of three new color inkjet printers: the entry-level Color StyleWriter 4100 the mid-range Color StyleWriter 4500 (providing Mac customers with photo-realistic color) and the Color StyleWriter 6500 (designed for high-end inkjet printing for both Mac OS and Windows customers) Apple also introduced the StyleWriter EtherTalk Adapter II a printer networking device that lets Mac OS customers share Apple's color inkjet printers on an EtherTalk network.

The Color StyleWriter 4100 and Color StyleWriter 4500 have approximate retail prices of $350 and $490 respectively The Color StyleWriter 6500 carries an estimated retail price of $675 The StyleWriter EtherTalk Adapter II is expected to be available later this in August for about $260

Making Sense of the Ads

Finally there's news that Apple's advertising can get back on track David Roman Apple's vice-president of Advertising & Brand Communications announced that Apple's incumbent ad agency BBDO would be invited to participate in an agency account review effectively telling BBDO that it would have to compete with everyone else to win Apple's advertising business.

Miffed at this news BBDO announced the same day it would resign from the Apple account. In its written press release BBDO said it had created award-winning advertising for Apple for 12 years constituting the longest-standing major agency partnership in the computer industry The resignation will take effect Sept 30 1997

BBDO turned down the invitation to the IBM account review two years ago and has received significant recognition for campaigns created for Apple Just last year the agency received another series of advertising industry awards. In 1995 Apple's branding work was inducted into the American Marketing Association Hall of Fame Now awards are great for an advertising company but not necessarily great for the client Long-time readers will recall the Ranting One's continued ridicule of Apple's half-witted ad campaigns such as the talking dog or "tough questions" spots Let's see if the new firm can work smarter—and let everyone know Apple is still in the game

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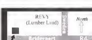

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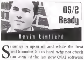

OS/2 Ready

Kevin Linfield

Summer is upon us and while the heat and humidity hits us hard why not check out some of the hot new OS/2 software releases. There are a number of new or updated products available to dedicated OS/2 users and many of them are available either free of charge for beta testing, or as a demonstration version.

Always a word to the wise—if you install beta software on your machine don't expect perfection.

If you here time to kill I strongly recommend trying out the StarOffice beta. I'm certain you will be as impressed with it as I am (see below).

Be on Acrobat

Adobe has finally released the finished version of their Adobe Acrobat Reader for OS/2. Acrobat Reader allows users to view PDF files created with Adobe Acrobat, a popular document publishing format. Available both as a Netscape/2 plug-in or as a standalone application, download a free copy from http://www.adobe.com/acrobat. Note that it requires OS/2 Warp 3.0 with Fixpak 26 or later.

Super Graphics

TrueSpectra Inc of Toronto is now shipping the enhanced version of Photo>Graphics for OS/2. Photo>Graphics Pro 2.0 features support for additional graphics file formats, TWAIN for OS/2 scanner device drivers, optimized Postscript printing, new drawing tools, additional image effects and a royalty free image and clipboard library. Suggested retail price is US$249.95 but owners of earlier versions of Photo>Graphics can upgrade for US$99.95 until Aug 31. Contact http://www.truespectra.com or call 416-224-0309 for details.

Aesop's Fables

Looking for an educational and fun gift for young children? Take a look at QVision Inc's Aesop's Fables Volume 1. This CD-ROM with native versions for OS/2 and Windows features 40 classic fables and original artwork for US$17.95. Download a demo from http://www.qvision.net or email sales@qvision.net for more information.

Zip Me Up

PKWare have released an upgraded version of PKZIP for OS/2 Version 2.5 features DOS V2.04g compatible compression, the ability to create OS/2 self-extracting archives, the ability to span files across multiple floppies, storage of extended-attribute information and long file-name support. Released as shareware, download a copy from http://www.pkware.com/pkos2250.html

Free Email Client!

In order to attract users to its upcoming Java email client InnoVal Systems Solutions has released a freeware version of its popular Post Road Mailer email client. Identical to the commercial Pro Edition release 2.5 is not restricted in any way. Register for a free copy at http://www.innoval.com/free or call 914-835-3838. I am now running this product at home and at work and am quite pleased with it. It supports multiple in-boxes, file attachments and much more.

New News Client

Panacea Software has announced ProNews/2. This full featured Usenet newsgroup client features filtering, smart decoding, ROT13 support, MIME and UUdecoding. In open beta testing as I write this you can obtain more information from http://www.program.com/panacea

Star Office 4.0 Beta

Will this product ever see the shores of North America? Star Division's Office Suite (word processor, spreadsheet, database, charting application, personal information manager et al) has been tantalizing us for years. I have been waiting for this best-selling European product to be sold here.

Now with version 4.0 entering beta testing I want this product! Anyone can download the OS/2 beta version (over 40 MB compressed!) from ftp://192.41.15.223/pub/so4/os2/01/beta/ but note it expires at the end of August. Please Santa I've been a good boy.

SmartSuite 97 Beta

Although it hasn't entered public beta yet, Lotus has started showing off its SmartSuite 97 for OS/2. At Comdex Spring in Atlanta, Lotus

Continued on page 34

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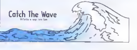

Online Grocery Shopping Coming to B.C.

By June Campbell

Stria Communications, Canada's first and leading utilizer of Internet commerce has recently opened an office in Vancouver with expectations of making online grocery shopping available to B.C. consumers.

"We have been in the Internet commerce business for over two years and launched Canada's first online grocery chain. In addition to this, we have set up many online store fronts and have done work in the area of transactional communities, for consumers and business to business applications" says Sandy Fleischer from the Stria's Vancouver office.

"We are bringing a chain of grocery stores online on Vancouver Island and I am currently negotiating with some stores in Vancouver and other areas of B.C. Everybody is talking about Internet commerce and we are one of the few companies (actually doing it). I believe that Stria can help interested consumers and corporations see beyond the hype of the Internet and electronic commerce."

Marketing director and founder Bob MacKalski says that when Stria zeroed in on the food industry by signing up Food Fair in Winnipeg, the company became the first to sell online groceries over the Internet. Food Fair now boasts over 1 500 online consumers and has another 1 300 on its mailing list.

Food Fair customers select items using a Shopping Cart type feature. A "save list" option allows them to save and reuse their shopping lists. Once the list is completed, the customer confirms the order and may opt to print out the form to be kept as a receipt. The approved list is sent to a server in Montreal, where the customer's postal code is noted and the order is forwarded via email to the Food Fair nearest the customer. The store confirms the order by telephone, packs the items and delivers if required.

Payment may be done online via the encrypted Web site or by cash or cheque upon delivery or pickup. Orders average around $100, with a $700 order being the largest delivery to a private household.

The service is most heavily used in winter months and has proven particularly popular with disabled customers and senior citizens. Isolated communities in the Canada's north have also taken advantage of the service, ordering online in quantity and paying air freight charges for delivery.

On Aug. 21 Food Fair and Stria will celebrate their first year of online shopping. MacKalski declined to provide details regarding B.C. plans but suggested British Columbians watch for an announcement in November.

For more information check out Stria's Web site at http://www.stria.ca or send email to sandy@stria.ca

June Campbell is the owner of Nightcats Multimedia Productions. You can reach her by email at campbel@istar.ca or by phoning 604 980 3219 during business hours. ●

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Symantec Adds Lustre to Telephony Gem with WinFax Pro 8.0

BY S J ROSS

WinFax Pro 8 0,
From Symantec Corporation for Windows 95/Windows NT 3.51 or 4 0 Estimated retail price $129

The two crown jewels of the Symantec Corporation are Norton Utilities and WinFax. In June the company released an upgraded and polished version of the latter WinFax Pro 8.0 which is a 32-bit fax and telephony program

Historically a fine product, WinFax continues to improve with a variety of new features For example WinFax now supports dual modems, providing a range of settings—from send and receive options to dialing properties—for each.

You can also send and track multiple Internet faxes, can fax greyscale and color documents, such as photographs and clip art, and can define two letterhead styles to merge with WinFax-originated faxes.

The handiest upgrade is the controller a Windows taskbar icon that changes to reflect the status of faxes and messages With just a mouse click the controller allows you to quickly access some of the more frequently required WinFax options such as fax send and receive without launching the entire program

The phonebook has been expanded to allow you to include basic PIM (personal information manager) information such as address and notes and you can create folders that allow you to group fax recipients into convenient categories

If you send periodic status reports WinFax allows you to schedule a recurring fax so it is transmitted either indefinitely or for a defined time frame But you must remember to update your attached file prior to transmission or WinFax will automatically send the original file to your recipient

For those who require hard-copy records WinFax now provides paper fax confirmations that you can personalize to include date time fax number number of pages and billing code

Get bent

WinFax has always been a fairly flexible program—allowing you to alter a range of options to suit your individual needs—and with this version WinFax incorporates even more flexibility You can customize the toolbar change your expanded views of outgoing faxes and configure your incoming fax options

WinFax also supports drag and drop of messages allows you to use the annotation layer to complete faxed forms and highlight selected text permits you to use old faxes as the basis for new faxes, and provides a fax cover-page wizard

The cleverest feature of WinFax is TalkWorks a voice-mail system introduced in the previous version TalkWorks allows you to customize a variety of features including playback volume and speed provides a mailbox wizard to set up your TalkWorks answering machine allows you to create a fax-on demand system and, if you have a sound card and microphone permits you to even record messages to yourself

But beware—some of WinFax's features (such as TalkWorks) are only available with certain fax modems

Contact Symantec directly to learn if your existing modem is compatible

For more details, point your browser tot he Symantec Web site at http //www symantec com u

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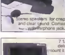
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Encyclopedias

Continued from page **17**

ter of 932 km Perhaps Grolier should read its own sources a bit more carefully

To those who suggest that testing CD-ROM encyclopedias on a scientific subject is not fair I did other tests on subjects as diverse as gemstones and American music. For example I wanted to find out something about Ruth Etting dubbed in the 1920s America's recording sweetheart and the subject of a Doris Day movie decades later None of the four even mentioned her

Dictionary delights

After the disappointment of the encyclopedias the Merriam-Webster Collegiate Dictionary was delightful This audio edition (version 1 5) lets you hear the pronunciation of words some with female and some with male voices It also includes 1 000 color illustrations and 25 tables However while extensive it is hardly comprehensive

It does include some modern slang such as "dis" (listed as originating in 1986) but it does not include phaser a word that has entered the mainstream via *Star Trek* since 1966 Technical words are also spotty In the field of mineralogy for example I failed to find the words lodranite forsterite and enstatite all of which are in my asteroid book

While all the encyclopedias have fine points in their favor (Compton's for example has a fantastic interactive planetarium where you can explore the constellations of the sky) none is wholly reliable My best advice is to use them as a starting point for basic information but hit the books in the library for in-depth information that can be cross-checked for accuracy

Cliff Cunningham a graduate of the University of Waterloo is one of only a dozen living Canadians who has had an asteroid named in his honor You can contact him at prayers@primenet.com ◆

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Summer Software

Continued from page **30**

demonstrated new OS/2 native versions of Approach, Organizer and 1-2-3 I suspect we'll see shipping code around the same time SmartSuite 98 for Windows is released. Such is life

Hot Summer Rumor

The hot rumor for the month involves Netscape Communicator for OS/2 We've been told there will be a public beta and the product will be functionally equivalent to the 32 bit Windows version We've also been told that although it is being co-developed by Netscape and IBM it will be distributed and supported only by IBM

But gossip on Netscape and IBM's relationship would make it appear that all is not well Rumor has it that IBM wants to ship Navigator 4 0 without the rest of the Communicator package (i e just the Web browser) because Lotus Domino is similar in many functions Stay tuned for more information

Freeware of the month

POP3Spy 1 0 is a small program that checks your email at a user-specified time interval and informs you if you have mail by changing colour changing icon playing a tune and even launching your email client if you like. I tested it with Warp 3 Connect and it works like a charm Download a copy from http://www.dataline.ch/~rch or get it from Hobbes

Kevin Linfield is a Toronto based consultant and freelance writer He can be reached via email at linfield@torfree.net ◆

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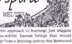
Unlocking the Human Spirit



by HILARY VAN WELTER

The other day while doing research at one of the fastest moving frontiers of the Knowledge Age—the Bloorview MacMillan Centre in Toronto—I lost my heart.

It happened the instant I looked into the huge brown eyes of a little boy who lay on an air mattress, motionless. He was unable to talk or move his body and yet in the brief moment I was with this beautiful soul and felt his energy I understood more about the possibilities of our future than a mountain of books could teach me.

You see, this little fellow represents what we so often miss in the dialogue about technology and education—the power of the human spirit. We get so caught up with the techno wizardry and the gadgetry that we tend to forget the human element. One of the words that constantly comes up when we talk about the new millennium is balance. How do we find balance of technology and the human spirit in one of the most important areas of the Knowledge Age—learning?

This is a very tough question because we have been blinded by our industrial models. We try to reform, reorganize and re-engineer education but the core ideology of our industrialized assembly line educational system stays the same.

A proper beginning

Let's start with the human spirit. We have at our disposal incredible tools to develop the true essence of the Knowledge Age: vital and happy human beings. In order to be happy people of all ages need to feel they have control over and responsibility for their destinies.

Technology provides us with an important means of liberating ourselves from the chains of our industrial past. Look at the choices adults now have in how they work. Many people are creating new work portfolios that combine a variety of working relationships. For example one person may simultaneously do contract work with one company, have a part time employment relationship with another while also doing volunteer work and taking a course or program of study. People are also carrying out their work in multiple locations enabled by technology—they are no longer tied to an office.

These are the changing realities of our world of work and most young people wouldn't want it any other way. This portfolio gives them the freedom and tools to grow and unleash their full potential.

The benefits of diversity

How are we preparing ourselves and our children for this reality? What if we liberated our children and helped them develop this portfolio approach to learning? Just imagine the incredible human beings that would emerge from a learning system that honoured our diversity and all our intelligences equally—including our musical, visual, natural (as in nature) and spiritual talents. Just think about the kind of people who would grow from a philosophy that truly respected exploration and play for all ages, as an authentic means of learning.

I saw this ideology of learning at the Bloorview MacMillan Centre. This marvellous place serves children and young adults with disabilities or complex long-term needs such as cerebral palsy, muscular dystrophy, amputations, and head injuries.

The centre is setting the pace for learning in the new millennium. It starts with adults and children being co-creators in learning. In the new Computer Camp for instance, campers learn about information technology in a fun environment that includes such activities as crafts, art and outings, which are all carefully crafted play. The campers determine what they want to learn and the counsellors design the activities based on daily feedback from the kids.

The Cosmic Bird Feeder for example integrates a wide variety of activities including art, gardening, storytelling, music, drama, ceremony and—most of all—play. The adults follow the lead of the creative impulses of the children as they explore together. Learning and healing are vital parts of the programs whose goals are to build self esteem—the foundation of life-long learning.

The secret is balance. This is the world of "and," not "either/or."

I believe that we must create a level playing field with children, and young people so that together we can open doors for real learning. As adults, we have so much to learn from these natural change artists who treat life with joy, trust, love and vitality. The children and young people I have had the great fortune of meeting have helped me rediscover that education is the learning that takes place through spontaneous encounters with the unexpected. They have shown me that technology opens the gateway through which the human spirit can soar.

How long must we wait before this natural and ancient philosophy of learning enters our mainstream educational system? Our kids are ready but are we?

Hilary Van Welter is the executive vice-president of the Proactive Group of Companies, which specializes in sustainable strategic change. This article is an excerpt from her upcoming book, *Vanguards of the New Renaissance*. She can be reached at proactiv@rogerswave.ca ◆

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HOT GAMES on the horizon

By Marc Saltzman

In short, I felt like a proud father

Watching at close hand this vibrant and unpredictable computer-gaming industry mature over the years is extraordinary enough but attending a convention that celebrates its existence and proves its state of growth was simply heaven on earth I stood there smiling from ear to ear staring at a 50-foot high metallic display of Quake II Tomb Raider's Lara Croft riding a motorcycle back and forth, and movie theater-sized screens previewing the sequel to Myst and Steven Spielberg's Trespasser This was my industry and I was at a computer gamer's Disneyland peering into the window of the future

Overly dramatic or not I am referring to the recent Electronic Entertainment Expo (E3) held in Atlanta Over 35 000 people crammed into the Georgia Dome and World Congress Center to catch a glimpse of what will be the hottest commodities over the next year for computer games video games and edutainment products Over 2 000 games and services were exhibited but the following titles were the ones that stood out in the computer game division

Action

This is still the hottest genre of all the PC gaming categories More specifically 3D action games were the focus with almost all of them supporting a 3Dfx or Rendition chipset (3D accelerator cards)

The top first person perspective titles were Sierra s Half Life id Software s Quake II and GT's Prey (which is scheduled for a release some time in 98) All three proved to be excellent technological advances over their predecessors with full multi-player support and free editors to make your own environments To a lesser extent, Lucas Arts Dark Forces II Jedi Knight ION Storm's Daikatana, 3D Realms Max Payne, and GT's Unreal also drew in the numbers

Speaking of Quake and 3D accelerator boards a heated multi-player LAN contest took place at E3 sponsored by Intergraph and the winner—Thresh—drove away with game designer John Carmack's blood-red Ferrari Over 2 000 people entered the single-elimination tournament

Strategy

Microsoft s Age of Empires attracted much of the attention at the show from both real-time and turn based strategy fans Bruce Shelley the game s head designer was on hand to demonstrate its features

Other showstoppers were Bullfrog s Dungeon Keeper Blizzard s Starcraft (playable free over Battle Net as is Diablo) and another Command & Conquer/Warcraft II offshoot Dark Reign from Activision

Adventure, Role-Playing

Myst sequel Riven looks simply gorgeous and may well set the next standard of graphic adventures, as the original did more than three years ago Westwood s Blade Runner based on the 1982 movie is set for a fall release and had its own jaw-dropping movie designed to show off its unbelievable graphics and sleek gaming engine

LucasArts is poised to release the third and final installment in its Monkey Island series. Curse of Monkey Island was in playable form and you'll be happy to know it maintains the humor and clever puzzles as the first two titles

Douglas Adams (the brain behind *The Hitchhiker's Guide to the Galaxy*) is back in Starship Titanic—a photo-realistic non-linear adventure game that uses new speech-recognition and AI technologies with its many witty characters

Spielberg and DreamWorks Interactive are taking a run at PC gaming with the digital follow-up to the blockbuster movie of 1997 *The Lost World* Trespasser is a 3D dinosaur game that combines elements of adventure action, and strategy all rolled into one scary premise As with the movie you are alone on the "Site B" island to fend for yourself

Simulations

Certainly with this genre more than others, it was the year of the sequel as you can tell from E3 s top sim titles Janes Longbow 2 Microprose s Falcon 4 and MechWarrior 3 Maxis SimCity 3000 Sierra s Earthsiege 3 and Red Baron II Looking Glass Flight Unlimited II Microsoft s Flight Simulator 98, and Origin s Wing Commander V Prophecy (awesome!) Graphics seemed to be the most improved areas with many supporting new snazzy 3D accelerator cards

Sports

EA s NHL '98 was the hands-down winner in the sports category I didn t think Electronic Arts could add much to the stellar NHL 97—but they did! This sequel sports a beautiful new interface with large colorful polygon players, better AI and real player signature moves and faster frame rates. Other notable sports games include Microsoft s Baseball 3D and Acclaim s NFL Quarterback Club 98

Puzzles

Fans of the popular Berkeley's You Don t Know Jack (YDKJ) series (CD-ROM or Internet versions) will be happy to know that two new titles will be out by year-end. YDKJ, Vol 3 (with new question types) and YDKJ Television Also look for a new word game, Acrophobia, on Berkeley s free Web network by the holiday season ◆

A Rich Role-Playing Experience

BY WILLIAM A. WOOD

★★★½☆

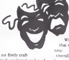
Realms of Arkania III: Shadows Over Riva

From Sir-tech Software on CD-ROM for PCs. Street price $65

Are you willing to commit? This is an important question to answer before loading Shadows Over Riva (SOR) onto your PC. This role-playing game, the latest from Sir-tech (whose CRPG pedigree is superb), will demand your attention in a way players used to the quick hits of Duke or Quake may not be prepared for. If you're willing to sign a good chunk of your life away however, it will give you an absorbing and challenging experience in return.

Like its pen-and-paper ancestors, the centre of SOR is the team of characters that serve as the player's alter ego(s) during the game. Although SOR provides a ready-made bunch of adventurers, it is obviously much more satisfying to craft a set of your own.

This process can literally take hours (a greater or lesser degree of control can be given to the computer—it's not all or nothing). Each character has pages and pages of stats, skills, and spells. You can create as many characters as you like, but your team can consist of only six members at a time.



Where to, buddy?

So there you are: six finely crafted adventurers trained, equipped and ready for action. What now? That's entirely up to you.

SOR sets you down in the middle of the port city of Riva. As you explore, questioning the populace and mapping out the city and surrounding countryside, you will be presented with many dangerous and mysterious quests: trouble in the graveyard, a pet stealing wizard, a vampire in the sewers, racial prejudice, pirates, a hidden mine full of dwarves and demons, and much more. It's up to you to pursue or avoid the various missions, perhaps biding your time if something looks too tough (after all, your characters will get stronger over time—this is what role playing is all about).

This non-linear approach can be disorienting if you're used to being told what to do, but it's also a satisfying challenge. Ultimately your goal is to bring peace and security to the region. With the number of problems at hand that will take planning, perseverance and time.

Overall the look of the game is fairly good if somewhat dated—pretty graphics aren't the point though. One really twisted aspect: the people you'll meet all have weirdly altered celebrity faces (some famous, such as Michelle Pfeiffer, and some obscure). This takes some getting used to.

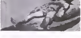
Clumsy Combat

Players use a first-person view to move about and converse with citizens. When it comes to blows however, the view shifts to a rather clumsy three-quarter top-down grid view. Combat is turn based, with quicker characters and monsters getting their licks in first. Having the computer control the fight is an option (it does pretty well) if things get too crowded or if you're just mopping up weaklings.

The music in the game is pleasant, which is a good thing—you'll be hearing it over and over and over again.

In short, SOR is a rich, free-ranging game that will reward those looking for a complex, lengthy fantasy role-playing experience. Just the sort of thing computer games were meant to be.

Games this complex often force players to look for help. For hints and tips, check out http://members.magnet.at/pulaski/riva/riva.htm



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You asked us...

PostScript explained

Q Dear Doctor: My wife and I are currently in the market for a laser printer. We have looked at a number of them and need a question answered: What is PostScript, what does it do and what are the benefits of it? Everyone I have spoken to seems to give a different answer. This even includes the technical-support people at the various printer manufacturers. These companies include PostScript but their reps cannot really explain what it is.

Andrew via email

MacShrink David Rosen replies: PostScript is a sophisticated page-description language (PDL) that's used for high-quality printing on laser printers and other high-resolution printing devices. Invented by John Warnock and Charles Geschke at Xerox's Palo Alto Research Center (PARC), PostScript has revolutionized the way computers "speak" to printers. Warnock and Geschke later left Xerox and founded Adobe Systems, the organization that arguably jump-started the entire desktop-publishing (DTP) industry.

Although PostScript is a high-level programming language and you can learn to write page descriptions in it, PostScript is usually invisible and automatic for most people. In fact, the vast majority of computer users don't realize they're actually programming in PostScript when they use many modern computer applications.

When they ask their computers to print, it's the computers that generate the PostScript code that goes to the printer. This is a very important feature because it means people don't have to learn how to program just so they can print their letters and memos.

A major benefit of PostScript is its device independence. This means you can print the PostScript code generated by a software application on any printer with a PostScript interpreter. You can take PostScript files generated on your Mac or PC to any service bureau and these organizations can print your document using expensive typesetting machines with magazine-quality resolutions of up to 2,400 dots per inch (dpi). This is important for many designers, publishers, and other folks, since the technology lets them see what their documents will look like before they are sent to an even more expensive typesetter or commercial printer.

A PostScript printer includes the processing circuitry needed to decode and interpret printing instructions written in the PostScript language. Generally these printers are laser printers, although an increasing number of inkjet printers are PostScript compatible. PostScript printers are computers in their own right, albeit specialized ones. They have their own CPU chip, input/output (I/O) capabilities and some random-access memory (RAM). To speed things up, you can even attach a separate hard drive to some PostScript printers. Hard drives can be used to store hundreds of additional PostScript fonts, eliminating the need to download them from your computer every time you print. Depending on the complexity of your document and the speed of your local area network, downloading fonts can take anywhere from a few seconds to several minutes.

With all this extra hardware, PostScript printers are usually more expensive than their non-PostScript siblings. However, they can usually print more elaborate text and graphics in subtle gradations of gray and color than non-PostScript printers. They can also use Encapsulated PostScript (EPS) graphics and outline fonts, both of which you can size and scale without introducing distortions.

Speed is another concern. PostScript printers are generally faster—sometimes appreciably faster—since they have the on-board processing power. Non-PostScript printers have to rely on your Mac or PC to do this. Depending on the speed of your computer, how much RAM it has, plus the type of local area network in your office or home, printing a large graphic document can be excruciatingly slow on a non-PostScript printer.

So, PostScript printers are particularly useful if you're designing anything graphical, if you need fast output or if you want to use a service bureau for printing your final work. If you're just using your computer to keep your books, write letters or let the kids run some CD-ROM games, a non-PostScript printer may be more suitable for your needs—and your budget.

Can Boot Manager tame Win95?

Q How do I install Windows 95 with OS/2's Boot Manager? I have to start using Win95 at work so I want to have it at home too. But it took six tries, a few hard-disk reformats and six months to get Win95 working on my son's machine. I don't want to risk my OS/2 machine unless I know I can safely have multi-boot capability. Thanks for any help.

Joe

Kevin Linfield responds: Fortunately for all OS/2 users, Boot Manager works with (as far as I know) all other operating systems, including those from Microsoft. I personally have installed DOS 5.0, DOS 6.2, Windows 95, Windows NT and LINUX with Boot Manager over the years. The trick is to install Boot Manager first (on a blank hard drive if possible), then install any Microsoft operating system. Note that all Microsoft operating systems will disable Boot Manager, but you can easily re-enable it by booting from your OS/2 disks (Installation disks or your

Continued on page **40**

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Continued from page 39

bootable disaster-recovery disks) and running OS/2's FDISK marking the Boot Manager partition as "startable"

Since you already have OS/2 on your hard drive you should look into a product called Partition Magic. It will let you repartition your hard drive without losing any information. Since Windows 95 must boot from your C: drive you may have to manipulate your partitions a bit Before you try anything don't forget to back up everything!

Fixpak fidgeting

Q I read your article about the first Fixpak that IBM has brought out for Merlin. I applied this Fixpak and then my machine could not boot anymore due to a problem with one of the new DLLs I booted to the command prompt and replaced the offending DLL (PMWP.DLL) with the old version, after which everything has been working fine I'm a little confused now though Is this normal and should I worry about this giving me problems in the future?

Joris

Kevin Linfield responds What you did was perfect for your situation Although Fixpak 1 patches many problems and annoyances with OS/2 it does add some difficulties of its own Since it makes a backup of all of the old files (in the \ARCHIVE directory) if a user knows what file is causing problems, they can simply replace the "new" file with the older one Rumors abound about another Fixpak being released this summer and it might be out by the time you read this.

56K? Not possible!

Q I just bought a US Robotics 56Kbps modem but the maximum speed I can reach is 31.2 Kbps! First I thought it was my modem, but when I brought my computer to my ISP (they have crystal-clear phone lines) I connected and got speeds up to 45 Kbps! What can I do to make my phone lines better (or what can I ask the phone company to do)?

Alan Zisman responds. Surprise! You've discovered the normal behaviour for a so-called 56Kbps modem Government regulations in both the U.S. and Canada about the amount of voltage allowed on a so-called plain old telephone service (POTS) line limits these to 53 Kbps at best. In the real world this is rarely attained. Instead speeds in the 45-49 Kbps are more likely. And as soon as there's any noise on the lines, performance drops down to standard 33.6 Kbps—or slower That's for downloads only. Uploads are limited to 33.6 Kbps at best

Finally there are currently two competing standards for 56Kbps modems, and you need the same standard as your Internet service provider Since you've got a US Robotics modem use it with a telecom program to phone USR's toll-free line-test number (888-877-9248) to see if your phone line will support higher speeds

Don't scan me

Q When I lose power (electricity goes out and so on) Win95 SR2 boots up to a SCANDISK prompt telling me I might have errors and to "Press any key to Continue" Is there any way to bypass this? I can not be at home every time we lose power

Alan Zisman responds. It's not a bug it's a feature The newest version of Windows 95 so-called OEM Service Release 2 (aka Win 95b) automatically wants to run SCANDISK if the system restarts without having gone through the official Shut Down procedure In this way, it attempts to check for and repair any file-system damage caused by the shut down

You can turn this off if you want Like most of Win95's boot features it's controlled by the text system file MSDOS.SYS You can edit this file in DOS Edit or Notepad, but you'll have to turn off its read-only and hidden attributes first Then, add a line to the [options] section reading AutoScan=0" (no quotes of course) Save and restore the read-only and hidden attributes

Duplex Dilemma

Q Hi Alan I was wondering about the Internet Phone program I got in a "communication CD-ROM that came with my modem Upon installing it I don't fully understand what is Full/Half duplex and how can I change it And is it really true that I can talk to people over the Net like over the phone?

Alex

Alan Zisman responds. Yes you can use the Internet as a sort-of long-distance phone you and the other party need to be on the Net at the same time and you need to contact via a server that supports your software You'll probably find it somewhat awkward to use and low-fidelity—but the price is right!

In order to do this, you need a sound card that supports full-duplex—that means it can access its input and output stages at the same time otherwise you're limited to the kind of communication we associate with early radio—one person talking, the other listening then reversing roles. Most recent sound cards support full duplex but not all do, and in many (such as the popular Sound Blaster 16) you have to specifically turn it on using for example the Windows 95 Control Panel.

Send any **PC**-related questions to **Alan Zisman** He can be reached via email at Alan Zisman a.zisman@cyberstore.ca

- **OS/2** questions should be directed to **Kevin Linfield** a Toronto-based consultant and freelance writer He can be reached via email at linfield@torfree.net
- If you have questions for **MacShrink, David Rose** send them to MacGuy@tcpon.com Your last name and email address will not be printed All of the MacShrink questions become the property of MacShrink and David Rosen ◆

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GIF Animation Studio

An Animated Book

BY BRANDI JASMINE

GIF Animation Studio
By Richard Koman, from O'Reilly Publications
$57 95 (includes CD-ROM)
For more information visit http //www.ora com

In the past animation has been out of reach of all but the most dedicated hobbyists. But new tools bring simple animation well within the realm of possibility for desktop artists. *GIF Animation Studio*—a book and CD-ROM—brings together some of the new "GIFmation" tools that make animation a snap

GIF animations are appealing to Web artists because they are platform and browser independent Users don t need special software or plug-ins to view them Also the GIF (or compatible) format is featured in most image-editing packages With each new software cycle it seems that these applications are improving, adding new tools to the Webmaster s kit and new life to Web sites and presentations

The CD-ROM included with *GIF Animation Studio* offers a variety of shareware and demo programs for both Macintosh and PC formats GIF Construction Set Gif gif giF RGB2Hex and save-disabled demos of Kai s PowerTools and Photoshop are also included as well as numerous samples from the book.

The book itself is packed with information. The author presumes most readers are new to computer aided design and the basics are given good coverage

GIF Animation Studio tends to focus on the applications as opposed to the craft of animation You can be the world s best GIF Constructor but that means nothing if you don t understand the fundamentals of animated movement The Web is desperately crying out for books, software and tutorials that teach the creative basics after the software techniques have been learned There is a fair effort made to do this in *GIF Animation Studio* mainly involving fade-ins and tricks with Photoshop filters which can be used to create some spectacular effects.

Brandi Jasmine is a freelance writer and wanna-be animator She can be reached at jasmine@direct com You can see some of her efforts with *GIF Animation Studio* at web idirect com/~bjasmine/gallery/animation/ ◆

Cyberspeak For the Highly Strung

BY S.J. ROSS

JargonWatch A Pocket Dictionary for the Jitterati,
As overheard by Gareth Branwyn from HardWired $12.75

From Silicon Valley and San Francisco to midtown Manhattan and Hollywood from the Internet and the World Wide Web to computer hardware and software from the people who write the codes to the people who inhabit the systems welcome to the 90s where jitterati ("what the digital generation becomes after tanking up on too much coffee") of all types and locations are inventing and evolving a new language

Written by Gareth Branwyn, author of *Internet Power Toolkit* and editor of *Wired JargonWatch* a tiny notepad-sized book with a rough cardboard cover (treeware) is a delightful mocking look into the twisted and often amusing words and phrases originating and mutating in the high pressure fast paced coffee-fueled cyberworld

Highlighting the newest the most interesting, and often the most tortured words to crawl their way into a once self-respecting language *JargonWatch* terminology ranges from JPIGs ("the new generation of cyber cops") and treeware ("hacker slang for documentation or other printed material") to beepilepsy ("the brief seizure people sometimes have when their beeper goes off") and SloGo ("corporate slogans used repeatedly, in a manner similar to a logo")

But beyond clever words and phrases Branwyn also delves into a discussion about jargon and slang how online technology is contributing to and amending terminology and how cyberlanguage is blurring the distinction between technical jargon and street

Continued on page 47

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PNG Image Format Improves Color Control, Loses Less Data

BY PAUL ANGYAL

PNG is the new wunderkind of image formats designed for Web use, and Netscape Navigator 3 0 users can now take advantage of it

PNG (pronounced ping) grew out of a decision by Unisys Corp to enforce the patent they hold in the GIF-compression technology on software manufacturers That decision, it turns out was fortuitous for Web users, because it lead to the development of PNG which is far superior to GIF on many counts.

PNG images lose no data during compression The files are about 30 percent smaller than GIFs and also offer superior color control GIFs are 8-bit images so the color palette is limited to 256 shades That number is not sufficiently refined when you're dealing with serious graphics or 3D PNG images can technically go up to 48-bit level although at this point 24-bit is all our monitors can handle (16 7 million colors)

PNG as a single image format offers great flexibility in layering multiple transparencies, and other features that result in very high-end output the kind you get working with Adobe PhotoShop for instance (their new release 4 0 has built in PNG support)

Dare to Dream

PNG's most interesting feature is the alpha-channel control that makes it possible for images to become semi-transparent so they can be overlaid and bring you tint ghost and fade that you can't even dream of with ordinary GIFs

If you have Netscape Navigator 3 0 or later and are on Win95/NT you can download a plug-in from Siegel and Gale (http://codelab/siegelgale com/solutions) With the plug-in on hand you can do a lot more than just look right-clicking opens up an interactive menu where you can zoom sharpen invert, and do all kinds of neat things with the image while watching it change before your eyes.

At this point Explorer users are out of luck IE 4 0 offers some native support for PNG but only under the IMG tag used for GIFs and JPEGs and only with the crudest features (they are working on it they say)

A comprehensive resource site and links to free tools can be found at W3C's PNG site (http //www wco.com/~png)

A pretty picture (format) indeed ◆

Thank you for participating in the *Computer Player!*

COMPUTER REPAIR LISTING

This listing for the September issue will cover shops and businesses in the Lower Mainland Please complete the following and fax it back the the Computer Player! office to the attention of Megan Johnston at 604 688-4270 by August 10 1997

Contact name: ____________ **contact phone:** ____________

1. Business name ____________

2. Address: ____________

3. Business phone number ____________

4. Email address ____________

5. How long has your shop or business been in operation? ____________

6. What repairs do you specialize in? (software, hardware upgrades, [illegible] CPU, etc)

7. Are you authorized to service certain brands? (please specify)

8. Do you offer warranties on your work? (please specify)

9. Do you make house calls or provide pick up & delivery? (please specify)

10. Do you charge an hourly fee for consultation/repairs? (please specify)

please note submissions may be edited for space and/or content

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Latest Flowcharter Creates Powerful Diagrams With Ease

BY JACQUES SURVEYER

Flowcharter 7

From Micrografx Price $400 ($170 upgrade) as part of Graphics Suite 2, $480 ($200 upgrade)

The days of dread are over Putting together an explanatory diagram or flowchart used to be an intimidating prospect No more Programs such as Visio CorelFlow 3 and ABClear have made the process much more approachable But the latest edition of the granddaddy of diagramming and flowcharting programs Micrografx Flowcharter 7 0 once again shows how to make diagramming really easy

Also along with hundreds of fonts and templates plus thousands of clip-art images Micrografx has stuck in Cool Sheets and Living Flowcharts for all those small and home office users who need a little extra help in explaining or documenting their tasks

Diagrams and Flowcharts

Diagrams and flowcharts act as alternatives for presentations The approach you choose will depend on the type of the information you need to convey

Use a diagram or flowchart when

1 there are several connected or inter related images in the diagram
2 a process or path in a series of steps needs to be explained
3 detailed instructions on what and how must be included,
4 and when "when" and "what" to do, not "why" or "how come" is the message

Use a presentation program when

1 persuasion is the main message
2 numbers and graphs are major parts of the show
3 ideas and concepts have to be listed and exposed in bullet form
4 a slide show with audio style and special effects is expected.

I have seen smart trainers and presenters use both tools at once or interchangeably But think of diagramming tools as being instructional and presentation tools as persuasive

Getting into Shape

Flowcharter 7 comes with dozens of predesigned templates for use in your diagrams In addition, the program links up with the Micrografx MediaManager allowing tens of thousands of clip-art drawings and pictures to be easily imported into your diagram So it is worth the time to check out the Shape palette (just click on the arrow bar to step through the available choices) and see what templates you want to work with My personal favorites are Auditing Color Flowchart Industrial Signs Networks (LAN/WAN) Networks (PC) People and Project Timelines

To draw a shape just click on the Shape tool and start laying out your diagram Click on the form and voila a shape appears. Click again and another copy appears. Go to the Shape palette and click on the next shape you need Point the mouse to where you need the shape and click. Don t worry about connecting or formatting the shapes—that is easily done Rather lay out five or six shapes then click on the Finish button or just choose another tool from the toolbox

Flowcharter is a complete drawing program, with all the basic drafting tools (box, circle ellipse, curved line jointed line, polygon shape and so on) and shape controls (bring to front and back align rotate move enlarge reshape and so on) one would expect in a good draw program The trick is to learn two things First the shapes and connectors are smart Once linked together they move rotate and resize in unison Second there are a number of shortcuts for working with Flowcharter shapes

Here are some basic tips When you have selected the shape connector draw or text tools you have to remember to turn them off either by selecting a different tool clicking the Finish Button or right mouse-clicking anywhere and select Switch Tools.

Right mouse-clicks are vital When you right mouse-click on a shape a menu pops up allowing you to edit for form text text position format (including color fill, and outline) properties, and scripts Right mouse-click on the form and you can set general properties that apply to the complete drawing Right mouse-click on any toolbar and you can

Continued on page **46**

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Laptop, Call Home!

BY JUNE CAMPBELL

Computrace
From Absolute Software Corp. Software/Activation Contact: 800-220-0733 or http://www.computrace.com Price $39.95 $80 per year (monitoring service)

Would you deliberately install an invisible and indestructible virus-like application on your PC, knowing it was going to place clandestine phone calls through your telephone line? Have you ever dreamed of a laptop that would phone in and report its location if stolen? If your answer is "yes" you may be ready to sign up for Computrace a brand new stealth virus-like technology that is proving to be remarkably effective at recovering stolen mobile computers.

Developed by Absolute Software Corp in Vancouver this electronic security product has completed its beta-testing phase and is being released for sale throughout Canada and the United States.

The tiny software program (under 7KB) installs quickly and easily on your hard drive using a password and code number you are issued when you purchase the product. Once installed, Computrace is virtually indestructible—not only is it completely invisible on your hard drive it amazingly survives disk formatting and FDISK partitioning. When activated Computrace silently dials out through your modem and phones a toll-free number to the central monitoring service where the phone number is recorded. Computrace continues to silently and reliably phone and report your computer's whereabouts adhering to a schedule you've specified.

Springing into Action

If Computrace cannot complete its call at the appointed time as in the case of theft it swings into alert mode and persistently attempts to dial out. The instant the modem is connected to a line, Computrace phones the monitoring service and report its whereabouts even if Caller ID is blocked or the number is unlisted.

In November 1996 Computrace client Bea Lorimer of In Focus Tour Consultants was working at a concert for the rock band The Tragically Hip at Maple Leaf Gardens in Toronto when her Toshiba laptop was stolen backstage. The computer made contact with the monitoring centre on Jan 17 1997. It was recovered the next day by police in Woodstock, Ont.

According to Peter Smythe Absolute's marketing manager Computrace was 100 percent successful in retrieving stolen laptops during its testing phase. The only stolen computer not yet recovered was a desktop PC with an external modem. Thieves left the modem behind; whoever has possession of the hard drive will be in for a surprise should they ever decide to hook up a modem.

One of a Kind

Computrace is a product seemingly without competitors. Of the various alarms and security devices available for laptops only Computrace offers electronic security and monitoring.

Although Computrace is available to the home user Absolute's marketing thrust is to corporate enterprises, where mobile-computer theft is a serious problem. "Approximately 52 percent of thefts are internal" states Smythe. With Computrace corporations can address the problem of employee theft as well as monitoring the patterns of use. For example a laptop that consistently calls in from a home environment may be replaced by a more economical desktop model and the more costly mobile PC allocated elsewhere.

As for a downside, Computrace is only available for the PC using DOS Windows 3.x and Windows 95 and is less effective with desktop units. Also the geographic area monitored is limited to Canada and the United States. Otherwise my rating is an enthusiastic "thumbs up" for this unusual variation of a computer virus! ◆

Flowcharter

Continued from page 45

show/hide any toolbar as well as customize its layout.

Packing it in

Flowcharter has packed in a number of features for both the neophyte and the power user that we can only touch on briefly here. CoolSheets are wizards that guide users in creating sophisticated diagrams such as block charts, pyramid diagrams, timeline calendars, process flows, and so on. The SPC Wizard helps create graphs and Statistical Process Charts.

Finally the Shape Action Wizard, VBScript (soon to be Visual Basic Applications) and Flowcharter's hyperlinks combine to create Living Flowcharts—flowcharts that become presentations or interactive instruction manuals or simulation models or whatever a clever user wants to set up. There are plenty of excellent examples provided by Micrografx.

In sum Flowcharter starts you off easy in the world of drawing flowcharts and instructions. It then has the ability to empower some very imaginative, very cool interactive illustrations of what, when, where and how.

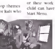
Jack Surveyer goes with the flow at jbsurv@inforamp.net

Plus! for Kids is for Parents, Too

BY ALAN ZISMAN

Plus! for Kids,
From Microsoft Corp. for Windows 95/NT on CD-ROM. Contact: http://www.microsoft.com/kids. Price: $24.95

It gives you kid-oriented desktop themes and parent-oriented control. It's for kids who like horses, kids who like snowboarding, kids who'd rather their computer look like a messy room. It's Microsoft's new Plus! for Kids (P4K).



Designed as an enhancement for family computers running Windows 95 and NT, P4K does a good job at appealing at the same time to kids and their parents.

Kids will like at least some of the 10 desktop themes. These themes, as in the original adult-oriented Plus! Pack, gave you wallpaper, icons, sounds, screen savers and even animated cursors built around a single idea (space, baseball, rainforests, underwater and a realistically cozy messy room among them).

Kids will also enjoy the included applications. Paint It! is not surprisingly a paint program with some way-cool clip art. Play It! gives a synthesizer keyboard complete with recording capabilities (add your own melodies to pre-fab rhythms). Talk It! plays back what your child types.

Mom and Dad will be happy with the control P4K gives them over their children's use of the computer. Building on Win95's built-in (but hard-to-control) security capabilities, P4K makes it easy to give each child his or her own log-in. This lets each member of the family have a customized desktop complete with a preferred theme.

More importantly, it lets parents control access to documents and applications on the computer. The Protect It! utility lets parents ensure children can't delete the system files or their work files, for example, and each child can have his or her own, customized Start Menu.

(One glitch—P4K shuts off CD-ROM Autoplay, which automatically runs discs when they're inserted into the drive, which is a nice feature especially for young children.)

P4K also tried to provide a similar level of control and security over children's Web surfing—with less success. Parents can restrict children's access to sites that have been rated by the Recreational Software Advisory Council (RSAC), screening out sex, violence and bad language. Most sites are currently unrated, though.

Unrated sites aren't necessarily objectionable, however. The option of limiting children's surfing to sites with acceptable ratings shuts off the Yahoo search engine, for example.

In addition to P4K's built-in Web control, a trial version of SurfWatch is included.

For under $30, Microsoft's Plus! for Kids provides a nice mix of applications and customization for kids with well-implemented security features for parents or teachers. ◆

Books

Continued from page 42

slang. For dedicated word watchers, Branwyn also provides an appendix of jargon and slang reference books.

More a giggle than a serious reference book (it is classified as popular culture/humor), *Jargon Watch* is nonetheless a handy book to keep near your computer. After all, you never know when you're going to receive Martian mail from your mouse potato keypal requesting that you F2F in RL to enhance your bytebond. ◆

Tracing the Internet's Family Tree

BY ALAN THWAITS

Where Wizards Stay Up Late: The Origins of the Internet
By Katie Hafner and Matthew Lyon, from Simon and Schuster, $32.50

Next time you're sending an email message or hitting your favorite Web site to download a cool graphic, take a moment or two to consider what's happening to link you to the world. Net connections and interfaces have become so smooth that some real effort is probably going to be required. How does your message know where to go? Why is it that your PC-based system can download a file from a Mac-based server? And how can it possibly happen so very quickly?

If you're curious about the answers to those questions, here's a book for you. *Where Wizards Stay Up Late* is an in-depth look at where the technologies that make up the Internet came from. Or, more accurately, where the ideas behind the technologies came from. It's a fascinating story.

The Wizards of the title are the men who worked for a company called Bolt Beranek and Newman (BBN) in the 1960s, 1970s and 1980s. BBN, which was recently purchased by communications giant GTE for US$616 million, was the home of such Net luminaries as Vint Cerf, Bob Taylor, Larry Roberts and Steve Crocker, each of whom had a major part in building what we now know as the Internet.

Told in well-written narrative fashion, the story gets down to explore some of the real nitty-gritty issues of creating large-scale networks that work (or how people dreamed they might work). The esoterics of packet switching theory, the wars fought over how much information should be held in message headers, the struggles to convince government, business and academe that such a thing as an "internetwork" was even possible—all the stories are here for your enjoyment and edification. ◆

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MAXIMIZE Your Sales Potential

BY JOHN MORRIS

Maximizer 97is,
From Maximizer Technologies Inc. for Windows 95/NT 4.0. Contact: www.maximizer.com. Suggested retail price: $149 ($100 upgrade, $79 if purchased directly from Maximizer)

The release of a new version of the popular Maximizer contact manager, Maximizer 97is, will no doubt please current users of this powerful product. The possibility of using US Robotics PalmPilot hand-held computer in sync with a full desktop or laptop-based Maximizer is very exciting.

It's a bit of a Cinderella story with Maximizer. The product has consistently provided some of the best contact management features available from an entry level product. However the company did not have the same financial strength behind it as competing products such as Symantec's ACT!

Savvy Solution

That's all changed now since Vancouver-based real-estate mogul and Cal State engineering graduate Terry Hu purchased the company in 1995. Maximizer 97is (the "Is" stands for Internet savvy) is the company's first release under Hu's tenure.

Maximizer's traditional strengths are still in evidence with Maximizer 97is. The product has always done well in two areas where some other contact managers have not. Maximizer supports multiple contacts per company as well as multiple "opportunities" per company using the Hotlist. Salespeople particularly in the "business to business" world, will find Maximizer's features in these areas very useful.

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Maximizer97

Maximizer is based on the powerful Btrieve database. This has several implications: you can support large customer and prospects lists and still get good performance; generally speaking a Btrieve database is much more difficult to corrupt than a dBase or Xbase database; and you can actually run multiple copies of Maximizer on your desktop at the same time! Maximizer's group and remote capabilities work well.

Maximizer has also always been distinguished from other contact managers by its "list-based" interface—a very efficient use of screen real estate.

What's new with Maximizer 97is? I'm tempted to say "not enough"—with the exception of Pilot integration. It now has basic MAPI or VIM email integration. This is a nice and much needed feature but Maximizer doesn't become a full email client—you'll still have to use Exchange, Eudora, or CC:Mail.

Pilot Soars

The nicest thing about the new Maximizer is the integration with the popular Pilot hand-held, which addresses what has been probably the biggest problem with contact managers: paper-based calendars are portable, computers are not. Now, however, you can sync your pocket-sized Pilot and your main system together using Maximizer. The Pilot can hold a fairly substantial database—and you can choose what part of your database to mirror on the Pilot. Changes and additions on the Pilot will be synced back the "mother" database later. Doesn't this sound handy?

Here's what the Maximizer team needs to work on. First, sending a single email or fax shouldn't require you to slog through the whole mail-merge procedure. Second, the calendaring function lacks many of the conveniences of a well-known competitor. Finally, the Maximizer team is holding back Hotlist features for users of Maximizer Enterprise (a complete sales-automation environment sold by almost 250 value-added resellers).

Maximizer Enterprise has the functionality that supports arithmetic in the Hotlist—in other words you would be able to assign probabilities, dates, amounts and expected values to Hotlist opportunities, then manage your sales pipeline without having to duplicate everything in an Excel spreadsheet!

If these changes were made, Maximizer would become a killer product. As it is, it's still good—and with the Pilot, very attractive.

John Morris is with Open Sesame Systems and contacted at 72144.723@compuserve.com or 416-781-0623. ◆

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News

PoCo Firm's Software Fuels Robotic Gas Jockey

by June Campbell

Before long motorists gassing up at Shell service stations may be served by Smart Pump an intuitive gas-pumping robot developed by ISE International Submarine Engineering in Port Coquitlam.

According to David Musil a mechanical engineer at ISE, this project is the first of its kind that is the first time a robot will interact with customers to this extent.

When customers register with Shell for the service they'll receive a card to place on their windshield that provides information about the make and model of the car and the location of the fuel tank As the car pulls up to the pumps the robot will read the card sense where the car is positioned and send a customer interface (i.e a little box) to the driver's window The driver will swipe their card through the interface key in their selection and the robot will go to work opening the fuel door and pumping gasoline.

Smart Pump utilizes ICE's proprietary software ACE 4 0 (Automated Control Engine) ACE, which runs on Windows NT and QNX operating systems is an embedded event-driven application featuring real time control In various adaptations the flexible and sophisticated software application has been used in the remote control of submarines and other submersives and is being used with robotic manipulators for the Canadian Space Agency

The Smart Pump robot has been under development for the past 3 5 years and is currently being tested in Shell stations in Sacramento Calif Following testing Shell will seek approval from regulatory agencies then will move into mass production

Musil remarked "I can't say when it will be released in Canada but California has the strictest environmental regulations in North America so once it's approved there we know it will meet Canadian standards And consumer response so far has been extremely enthusiastic

For more information contact ISE via email at info@ise bc ca, or check out the company Web site at http //www ice bc ca

June Campbell is the owner of Nightcats Multimedia Productions You can reach her by email at campbelj@star ca or by phoning 604 980 3279 during business hours. ◆

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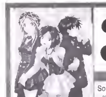

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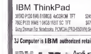

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the Technomad tour

Journal & Tools Report

by Alan Thwaits

Ah, the delightful sounds of a long-distance cycling tour! The hum of tires on a good road surface The "snick" of a clean-shifting derailleur The crackle and hiss of a high-speed cellular modem

What's that? How on earth did the modem get in there? Well if you'd been with me on the TechNomad Tour—a 1 800 km solo cycling trip through Ontario Quebec and New York State—the modem sound would have been a daily occurrence As would the sight of a palmtop computer and a cell phone lying on picnic tables at wilderness camp-sites and scenic lookouts

The tour was an excellent test of mobile computing technology albeit in the context of a journey powered by legs and lungs The palmtop-computer/cellular-phone platform as planned allowed me to do my work as a technology journalist while travelling "unplugged and connected"

It was surprisingly easy to adapt my cycling/camping routine to the demands of cyberspace At the end of each day's ride after setting up my tent making a cup of tea and having that all-important shower to wash off the road's dust I'd fire up the Psion send off accounts of the day's ride to my editor and to the TechNomad Web site collect messages (including some from people I met while en route) and check out a couple of weather-oriented Web sites to help me plan the next day's ride

Context is Everything

It was a wonderful combination of high tech content and low-tech context. The cell phone would beep the modem crackle and those messages would come pouring in seemingly from the ether itself while I watched a great blue heron tiptoeing through the reeds in an inlet off the St Lawrence River or listened to the cry of a loon as it skimmed a wilderness lake in the

Continued on page 55

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News

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32M SDRAM takes over the market
Quantum ST (UIDE) in #1 seles

Intel drop the Prices

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Intel HX512k/ LT430TX ATX	$155/225

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Borther 730DX / HP 6L	$410/$515
Modem: USR 33.6 / 56k Voice	$132/ 190
Creative 33.6 Voice/ 56k voice	$78/$125
Motorola 56k voice. (int. / ext.retail)	$190/250
Monitor; 15" SVGA 1280x1024 .28	$295
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SoundCard: Creative SB16/32/64	$58/105/128
Acer Sound 16int/ AW32	$30/40
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Jaz Drive 1G int/ext. scsi	$400/520
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(Creative SB16/32/64	+$60/105/130
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(USR Spt 33 6 / 56K Voice	+$135/190
(Ultra-IDE 2 1G/4.3G/6.4G	-$40/+$90/220
(Sony 100SX/200SX/SF	+$210/600/680
(Viewsonic V775/G771/17PS.	+$480/450/620
(w/ Asus TX M/B (AT/ATX).	+$70 / 120
(w/ Gigabyte TX M/B (AT).	+$50
(w/ Intel LT430TX ATX and Case	$140

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Intel P6-180/200(256k)......$1400/1500

Intel Venus 440FX 2S IP,EIDE, ATX
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Intel Dual PII(512k)-233 x 2........$3230
Intel Dual PII(512k)-266 x 2.......$3750
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Intel Dual PPro-180mhz x 2........$2180
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NM200DTF MMX200/32m/2 1G/12 1"TFT/10x/33 6	$3900
Toshiba 200CDS • P100/8M/810MB/11.8" DSTN	$2095
220CDS • P133/16M/1 3G/10x/12.1" DSN (new)	$3050
440CDT • P133MMX/16M/1 3G/12 1" TFT/10x	$4620
520CDT • P133/16M/2 1G/12 1" TFT/10x (1)	$5840
740CDT • P166MMX/16M/3G/13.3" TFT /10x/28	$7780
NEC 6050MH • P150MMX/16M/1 4G/10x TFT	$5660
IBM TP380 • P150/16M/1G/12.1" DSTN/	$2960
TP380D- P150/16M/1 35G/12 1"DSN/ 8x	$3350
HITACHI MX166T • 166MMX/48M/2.1G/12.1"/8x33.6	$4900
Daewoo P133-16M 1 4G/ 6x / 12 1 TFT	$2960

All listed prices, quantities and specfacations are subject to changed without notice.

High Capacity ISP Launched

Compiled by KEVIN LINFIELD

Teleglobe has launched its Globeinternet service in Canada, offering Internet service providers (ISPs) high-capacity connectivity to networks around the world. This service is claimed to significantly increase the available transmission capacity in Canada through Teleglobe's three gateways: Montreal, Toronto and Vancouver.

Information Overload

Reuters Canada has launched the Reuters Online Canada service for Internet and intranet sites. It is designed to bring general news, sports, business and entertainment news to Canadian Web publishers, corporate sites and corporate intranets. For more information, call 416-941-8103 or visit http://www.mediaworld.com

New 16-bit SmartSuite

Lotus has released SmartSuite 4.5, an updated version of its 16-bit desktop productivity suite for Windows 3.1. It includes 16-bit Word Pro 97, 1-2-3, Freelance Graphics, Approach, Organizer and ScreenCam. Also included is Netscape Navigator and Microsoft Internet Explorer. Lotus claims the 16-bit Word Pro matches the feature set of the Windows 95/NT version. Its estimated retail price is US$399 and US$149 for an upgrade. Contact 800-GO-LOTUS or http://www.lotus.com

Office 97 Intranet Kit

Microsoft is releasing, free-of-charge, its Office 60-Minute intranet kit. Designed to help users get up and running with their own intranet in less than an hour, it features step-by-step instructions on how to create intranets using MS Office 97 and FrontPage 97. Download a copy from http://www.microsoft.com/office/intranet

Portable Workstation

Neutral Posture Ergonomics has developed the "computERGO" portable workstation for telecommuters. Complete with a fully adjustable laptop work surface and document holder and mouse surface fold-out wings, it includes several spacious organizer and document file pockets. It folds into a compact suitcase when travelling. Call 409-778-0502 for more details.

Say Cheese

On Aug. 4, Storm Technologies Inc. will release EasyPhoto SmartPage Pro for Windows, featuring 30-bit color scanning, EasyPhoto organizing software and Adobe PhotoDeluxe. The software can scan any photo up to 20.3x25.4 cm (8x10 in.) at up to 5,000 dots per inch, and the hardware interfaces to your PC via the parallel port. Its suggested price is $249. For more information, call 888-438-3279 or visit http://www.easyphoto.com/storm

Bank-software Combos Forming

Intuit has teamed up with mbanx to bring the online bank's customers a special edition of Quicken. Available free of charge to current and new mbanx PC banking clients until Aug. 31, this version features integrated banking-transaction and investment portfolio tracking. Visit http://www.mbanx.com for more. Meanwhile, Canada Trust and Microsoft have teamed up to bring Microsoft Money 97 users Active Statement, to allow for seamless automated exchange of information between EasyWeb and financial records managed in Microsoft Money. More information can be found at http://www.canadatrust.com

Giant Hard Drive

IBM has announced an 8.4 GB desktop PC hard-disk drive. The Deskstar 8 features IBM's Magnetoresistive Extended (MRX) head technology and Ultra Direct Memory Access/33 technology, which contributes to increased performance of the drive. See http://www.storage.ibm.com for more information.

Prints Charming

Suma's new Personal Printshop for Windows enables users to import live video images from videotapes, photographs or any other video source and then use them to create a variety of personalized printed applications. Personal Printshop includes all necessary hardware (via the parallel port), cables and software to create greeting cards, calendars and posters. The suggested retail price for Personal Printshop is US$299.99. Call 905-513-7733 to learn more.

Hide Your Files

Steganos for Windows 95 is designed to encrypt and hide files within existing graphics, sound, text and even HTML files. The suggested retail price is US$39.95. Visit http://www.steganography.com or call 212-598-4939 for more details.

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Surf Monkey!

Bandai and Microsoft have teamed up to introduce a special Web browser aimed at six to 14 years old Surf Monkey is a fun and intuitive front end to Internet Explorer and features chat Web access and an email client Suggested retail price is US$24 95 Surf over to http //www.surfmonkey com to find out more

Photo manipulation update

On August 11 Adobe plans to release Adobe PhotoDeluxe 2 0 for Windows and Macintosh PhotoDeluxe allows even the most basic computer to manipulate and edit digital images Its estimated street price is US$49 More details can be found at http.//www.adobe com

Gathering Information

WiseWire is a free highly intelligent, personalized information service that combs the Internet and delivers customized information to consumers and business users The service is ad-driven See http.//www wisewire com for more

Hot Web sites

http //www arctic-travel com

This site features the 400-page Nunavut Handbook, a complete Arctic travel guide

http://www virtuallycanadian com

Canada's first online radio station, delivering a virtual stream of information interactive content and extreme entertainment with a Canadian viewpoint

http //www.cbc4kids.ca

CBC Radio's new Web site for kids featuring a summer-long children s radio festival

http //www personal accuweather com

This is a personalized online weather service for accurate, comprehensive localized, and current weather information ●

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the Technomad

Continued from page ***52***

Adirondacks Because the Internet supports both time-shifting (being able to connect to others in spite of differing schedules and time zones) and transparent geography (removing all the obstacles imposed by distance and frontiers) my correspondence and information-sharing was as effective as if it had happened in "real" time

An excellent cycling holiday to be sure But the TechNomad Tour was also designed as a place where technology questions could be asked—and hopefully answered What did the TechNomad Tour prove?

The good news is that the basic idea behind the tour worked—that I could use a palmtop computer and a cell phone to stay in touch and that the tools survived the extreme conditions imposed by exposure to the road and to the elements Not everything worked quite as planned—but the tour was, after all designed as a testbed, so that only meant that the learning was incorporated into the continuing design

Charge of the Bike Brigade

First, the solar panel powered battery charger didn t make it on the trip At the 11th hour it was discovered that there was a glitch with the microprocessor that managed the flow to the batteries—the NiCads were OK but the alkalines weren t accepting the charge As the sudden power drop at the end of NiCads life is an issue for use in the palmtop I decided to leave the solar panel unit behind while the problem was corrected, relying instead on a Pure Energy alkaline recharger As always the Pure Energy unit worked beautifully—I recharged all my batteries at a motel in Gananoque Ont. (after a full day of rain there was no way I was going to camp that night!) at the offices of *Quebec Micro!* in Montreal, and at a campground in New York state, where I found an electrical outlet taped to a tree near my campsite

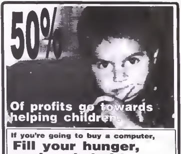
Cellular access imposed certain limitations on the experiment. Everywhere I had access to Bell Mobility s roaming feature I was able to do the needful The Psion chugged away the cell phone grabbed the connection from the ether and email flowed as it was meant to In New York State however NYNEX (the local equivalent of Bell) offers very little cellular coverage—so while I was in New York, I was effectively shut off from access

The fact that the fastest connection possible through a cellular phone is 9 6Kbps made me decide not to transmit photos taken with the digital camera as file attachments—sending a number of 1KB or 2KB text messages was one thing, but waiting for a 1 5 MB image file to transfer at 9 6Kbps was simply impractical So I went to Plan B which was to store the photos on the Kodak DC25 record their subjects and locations on the Psion, and transfer the images to the TechNomad Web site on my return.

With those two exceptions, though everything worked beautifully And the experiences I had on the Tour not only demonstrated the possibilities of mobile computing but also marked the threshold of new and exciting developments in the field—which is why I m already planning an enhanced TechNomad 2 Tour for 1998.

Check out the TechNomad Web site to see the results of the 1997 Tour and to check out what s developing for 1998 Point your Web browser at http //www praxcomm com and have a good look around—and don t forget to send me some email!

Alan Thwaits is a freelance journalist who specializes in mobile computing and online technologies. He can be reached at nomad@praxcomm.com ●



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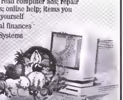
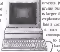


Upgrading for SPEED

by Jim Caughran

Application programs, the Internet, games—they're trying to fill up your hard drive and keep your computer busy. New programs do more and require more disk space, more memory to run, a faster processor.

These three parts of the computer—the hard disk, random access memory (RAM) and the central processing unit (CPU)—are the parts that may need upgrading. More speed and more space means upgrading these components.



Two years ago I bought a new fast Pentium 90 with 16 MB of memory and an 800 MB hard disk. It was a big improvement over the 386 that preceded it. I was a happy computer.

Prices fell. Memory in particular finally got so cheap that I couldn't resist boosting it to 32 MB.

The speed improvement was immediate and obvious. With 32 MB swapping from one program to another is much faster and the system is more responsive. When a multi-tasking operating system fills memory with programs, it has to keep programs that aren't in use on disk. Because the disk is much slower than memory, it takes more time to change programs.

Enough is Enough

How much memory is enough? Given the current low price of memory, 16 MB is a practical minimum for almost any computer. Windows 3.1, Windows 95 and OS/2 will run happily in 16 MB. If you're running Windows NT you'll want at least 32 MB. In either case, doubling that amount of memory will mean better performance.

As I enjoyed my faster computer, disk space began filling up. I wasn't doing so much more work that I needed space to store my documents. Nor was I buying a lot of programs, but each new version of a program is larger than its predecessor. My Internet explorations take space: each browser has a cache of recently accessed sites so it can redisplay them quickly. The assumption here is that communication to the Internet is limited but my hard disk is not.

So with plans to upgrade to Office 97 (100 MB or more) it seemed inevitable that I'd need a larger hard disk and I decided to buy it sooner rather than later.

The new drive gave me more than just space, however. New drives are faster and I noticed Win95 loads in less time. The old drive is a very fast backup device. If I buy another computer I can move the hard drive to it, so after it's paid for it's an upgrade with no downside.

Your processor requires more thought. If you were buying a new computer you'd want the fastest processor you could afford—more because it will still be fast three years from now than for what you want to do now. Similarly for an upgrade, get the fastest chip you can afford, one that is easy to install.

You can get a new motherboard to convert your 486 to a Pentium. Chris Wagg of MPM Computers Inc in Toronto, however, suggests you sell your 486 or give it to the kids. A new motherboard is almost as expensive as a new computer. The 486 and Pentium architectures are very different, creating problems with other components.

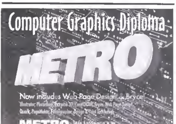
Thinking Alike

On the other hand, trading your Pentium for a faster Pentium is usually a fairly easy swap. The jumpers have to be changed to set the speed and you trade one chip for the other.

I decided not to upgrade the processor for now. What would make me want a faster CPU? If I played a lot of action games, did a lot of specialized processing (such as graphics work) or wrote PC programs for a living, I'd definitely consider a change. At some point the MMX technology will be standard (for now there are few programs written for it). But for routine work such as writing, the Pentium 90 is sufficient.

For now. As programs get even more complicated, I'll have to upgrade my CPU some day. Right now I have a machine that meets my needs. That's the most important consideration.

Jim Caughran has thought of programming a mainframe to emulate a personal computer, but prefers a simpler life. Send him a line at Jim.Caughran@sympatico.ca ◆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Protecting Kids From the **Dark Side** of the Net

BY SANDRA MINGAIL

A Grade 5 student logs on to the Internet for some serious after-dinner surfing. A few easy clicks and presto—instant access to pornographic pictures or racist speeches. Whether on a dare or through simple curiosity Net-savvy youngsters easily stray to the wrong side of the info highway. Pornography gambling, drug formulas, hate propaganda, and cyber strangers lurk closer than the glossy magazines at our corner store.

With more and more schools and homes subscribing to Internet services, the need for kid-safe surfing has spurred a parade of filtering software tools. Anointed with names to comfort jittery parents and academic stakeholders—KinderGuard, Net Nanny Cybersitter Surfwatch—each product employs a slightly different approach to blocking Internet content.

One product employs strict time-limit controls, while another operates in an undercover "stealth" mode as it tracks young surfers cyber tracks. Logs are often kept so parents or school site administrators can pinpoint guilty online culprits.

More sophisticated filtering software advertises features that block words or phrases in context so words with double meanings are not inadvertently blocked. Heavy-duty filter programs offer two-way screening in real time, so kids are covered just in case they're coaxed to reveal a home address or phone number or engage in inappropriate Internet Relay Chat (IRC).

Filtering software usually sells for around $50 and there are shareware versions available to download. But it's a buyer-beware scenario—some products offer monthly subscriptions to their blocked site database at no charge while others augment low purchase price with a monthly tab.

An emerging trend in preventing access to certain sites involves products that combine both site-filtering management tools and rating schemes. Specs for Kids offers a subscription-based service with access to more than 5 000 family and education-oriented pre-rated sites. Individual directories and documents within a site are also rated. Non subscribers visit the site enter a URL, and determine whether it has been rated. Companies and individuals are free to enter their own site ratings.

The rise of a classification system for Internet sites raises a host of questions. Who will set the standards for rating systems? How will the lack of international and cultural boundaries affect ratings? And just where does an expanding, nebulous electronic community draw the line regarding censorship?

Filtering solutions to date are not 100 percent safe. So what are concerned parents and educators to do?

A recent Internet use survey conducted in over 30 Australian schools recommends a mixed solution. It suggests teachers physically monitor student computer use through strategic placement of computers, where screens can be easily viewed by the instructor. Log files should be maintained and random checks conducted to determine where students are traveling. Teachers can also use software that downloads predetermined sites for offline viewing. And using an Internet service provider that limits access to tools such as IRC and newsgroups.

But many would argue physical constraints alone are not good enough to quell student misuse of Internet communication tools. They advocate communication with youngsters. Honest and open dialogue about online safety issues, they believe will instill a sense of responsibility.

Acceptable-use policies (AUPs) are becoming the norm in wired schools. A contract-like document, the goal of AUPs is to spell out appropriate use of school computer equipment as well as consequences if these rules are violated.

As more and more young people discover the joys of Internet exploration, filtering online access will become a greater child-rearing issue. For the time being, there is no such thing as filtering standards. How parents choose to meet the challenge is largely a personal decision ◆

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Comdex Canada 97, *As We Saw It*

Here are a few of the highlights and observations from Comdex Canada 97 (held in Toronto July 9-11) gathered by *Computer Player!* correspondents Lynn Greiner Kevin Linfield Caryn Mladen David Rosen S J Ross Jacques Surveyer and Peter O Walpole

Bright Lights, Big Comdex

What was the biggest thing at Comdex Canada this year? Comdex itself It was huge—massive—and lots of companies big and small showed up Notable for their absence were Apple and IBM but while the Apple was discussed (albeit in hushed tones of condolence) IBM was hardly missed Macintosh had the typical over-the-top locale and Novell proved it hasn't figured out anything about marketing after a decade of trying, with its slogan "Rock the Net" And I've just got to ask. Why would anyone name a company Fluke?—*CM*

Double the Screen Real Estate

I'm a sucker for large, clear beautiful monitors The one that captured my attention at Comdex Canada 97 was the Sony W900 ($5,999) It uses the Advanced Trinitron tube but in a 24-inch diagonal screen that yields a unique 16 10 aspect ratio Maximum resolution is 1 920x1 200 at a flicker-free 76 Hz It's 30 percent larger than a regular 20-inch monitor I'll take one!—*POW*

InfoInteractive

InfoInteractive is a service, not a physical product but it's still a great Comdex find. It monitors your phone line while you're surfing the Web and notifies you if someone is trying to call—it even tells you who You then have the options of sending the person a recorded message saying you'll call them back sending a message asking them to call later or ignoring the call It costs about $5 per month plus whatever your phone company's Call Forward Busy service costs Get more information, or sign up for a 30-day free trial at http //www interactive ca —*LG*

Joystick joy

While cruising the floor of Comdex I was awed by Techmedia's TechMaster 3D wireless joystick This small hand-held device is claimed to be the first (and only) joystick that delivers true 3D tracking and positioning for games such as Quake Descent and Virtual Cop I played Doom with it and, while it does take a bit of getting used to it was definitely fun. The TechMaster joystick delivers digital real-time positioning using ultrasound and infrared technology in three dimensions It is compatible with all current single- and two-button mouse applications and I was told it would be available through CompuCentre in Canada for less than $100 this fall Techmedia is online at http //www techmedia net —*KL*

Batra's WebSurfer

Want to hop on the Net, but don't have a computer? Well if Markham Ont -based Batra International Corp has its way you'll be able to do just that by using a low-cost set-top box and your standard TV WebSurfer is an interactive device that lets non-computer owners access the Internet and the Web You can also send and receive email The company claims links can also be made to a computer monitor, printer and even a ZIP drive The WebSurfer unit has a 33 6Kbps modem and the future ability to upgrade its own software via the Web Batra says WebSurfer will be available later in August at a leased cost of just under $40 per month including unlimited Internet access Batra can be contacted at 888-527-8888 or at http //www websurfer org —*DR*

IMSI MasterClips 150,000

IMSI's largest clip-art collection MasterClips 150 000 (they also have a 35 000 collection and a 101 000 collection) probably contains far more fonts clip art photographs animations sounds and Web-page images than a single person could use in an entire lifetime—but it would be fun to try Housed on 14 CD-ROMs MasterClips 150 000 contains, among other things 1 400 GIF Web-page images 2 000 True Type fonts more than 54 000 scalable black-and-white and color vector-art images 47 000 JPG photos in 50 categories and 47 000 TIF images (including drawings and engravings) Also included is a handy image browser and clip-art editor It is available for both Windows and Mac for a suggested retail price of US$69 95 Contact 800-833-8082 for more information —*SJR*

Noticing Notebooks

The Toshiba Libretto mini notebook weighs in at a mere 810 g (1 8 lb) and is so sleek it's hard to believe it has a hard drive The Libretto has a suggested retail price of $3 139 But the toys that really set my geek heart aflutter were Panasonic's rugged-style notebook with magnesium-alloy outer coverings resembling the soles of hiking boots. They're resistant to water shock, dust, and the perils of being dropped (although I'm not clear on how to shock a notebook) Priced at $4,920 to $6 945 for the CF 25 and $5 585 to $6 600 for the newly released 2 25 kg (5 lb) slimline CF 35 you don't have to be a klutz to love them but it helps Otherwise try out the CF-62 for $8 130 It's full of options and scores serious points for having the world's first 650 MB rewritable optical drive Get the details at http //www toshiba ca/html/notebooks html and http //www panasonic com/PCSC/PFCC/products html —*CM*

Photo-Manipulation Marvels

Two great new products have arrived that plug some holes in the photo-manipulation software field Wright Design provides smooth page layout design features for huge bitmaps mixed with vector drawings It is a hybrid whose speed and functionality grow with you Telepix's Get the Picture is a godsend—a photo album that stores images (and sound) with speed and usability for about $125 It takes another zero on the end of that figure before Get the Picture can be matched by competing programs Contact Wright Technologies at http //www wrightna com and Telepix Imaging Inc at http //www telepix.com —*JS*

Continued on page **63**

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如何選 Internet 服務公司(II)

作者：林啓清(JimLin)

一、前言

這幾期在Player上陸續寫了幾篇有關運用Internet的文章，收到不少讀者的來信，大部份都是對筆者文章的內容作更進一步的瞭解？可見大部份的人都有這方面的需求，但是卻找不到人問，吃了虧也只往肚子裡吞，還不斷有人作冤大頭吃虧（　　）

當然，花幾塊錢還是許多人覺得做過的事？但是，如果這樣繼續損失，那就不得不謹慎一點了。

二、Unlimited是真的嗎？

許多人一直找不到好的ISP？也有人問筆者，希望我能推薦一家ISP？

我只能講，在我的立場，是沒有一家ISP符合我好的條件的。因為每個人的要求不一樣，只要能滿足您的需求，那這家ISP在您來講，就算是好ISP。

天下沒有白吃的午餐？如果人人都全天24小時連在Internet上，那個ISP的人肯定要賠錢得慘兮兮。

有許多人看了廣告上的Unlimited而加入某家ISP，但卻一次也不連上這家ISP？所以，本來想佔便宜的，卻反而吃虧了。

所以，越想找便宜的人，越是會便宜，也越容易上當。

筆者可以斬金截鐵的講，如果有某家ISP號稱他們是Unlimited Time(無使用時數限制)，那麼該家ISP肯定賠錢，而且賠慘了！

賠錢的生意沒人做？那為何還這樣呢？原來這只是數字遊戲。

據說ISP他們的每一條線路都是$100(BCTEL收的)，而不是我們家用的十幾元。

而目前的ISP平均每個會員是收費的$20。如果有一個會員連上整個月不斷線，但是電話線這裡就已經虧了$80，還有專線的租金、機器損耗、電費、房租、人工等這些費用完全沒有著落。所以，ISP對於這種一連上就不斷線的會員真是怕極了（　　）

所以，雖然他們號稱Unlimited Time，只要您真的使用24小時，一段時間後，您肯定被列為黑名單，就算打電話去抱怨頻頻斷線，也不會得到什麼好臉色看？

實際上，並不會每個人這樣瘋狂連上Internet不斷線。所以，好客戶及壞客戶(連上就不斷線的人)平均一下，還不會令稍有規模的ISP受不了的。

但是，當這種不斷線的客戶慢慢增多時(為別家ISP趕出來的)，這ISP就會越來越嚴重，好客戶逐漸開始抱怨及流失。這個時候，這ISP只有幾種方法可用：

1)把壞客戶趕走
2)增加線路(這會增加成本，很少會這樣做)
3)改為非Unlimited(從此就有使用時間限制)

有人可能會說，ISP怎麼可以這樣為所欲為呢？當初明明講好是Unlimited的？筆者問問大家，您真去告ISP嗎？只為了區區$20？也許您會，但ISP真的是賠錢，真告的話，大不了關門了事。

所以，像這種游牧民族(壞客戶)很多，他們要的只是一直在Internet上，而不在乎一直改E Mail Address。沒辦法，溫哥華太多有閒的移民了。

如果您很容易就連去這種無時間限制的ISP，那只有兩個原因：

1)他是新的ISP，以後[illegible]
2)您使用的時段是離峰時間

很多人一廂情願的想，這些ISP會因為線路過忙而增線，但事實是增線的速度永遠趕不上用戶的增加速度。

筆者良心的建議是，如果您想讓您的E Mail帳戶變成半永久性的個人資料之一，最好是找一家不以無時間限制來招徠客戶的ISP為上策。

至於沒有使用時間限制的這些ISP都是屬於殺雞取卵型的，筆者並不看好(如果只是短期而為之，用來促銷，另當別論)。

三、傳統ISP的末日

如果您的消息靈通，您應該知道Rogers Cable也有提供Internet服務。

由於Cable是一直要在每個用戶的家中，而且是繼續可以提供服務(只要您開電視)。不像電話必須撥了某個號碼，您的電話才能接通。

所以，如果能利用Cable來當Internet的資料傳輸媒介的話，那我們豈不是可以隨時都可以即時收電子郵件(只要您的電腦開著)了？

沒錯，用Cable來做Internet的資料真是酷呆了！

但Cable公司[illegible]了？

因為用來傳輸電視信號的Cable，當初只是設計用來傳送單向的資料，而無法接收由用戶所送來的大量資料。

如果每個Cable上能承載數據線路，Cable公司那邊的機房可就又要大興土木了。

這就是最近看到Cable公司在外面挖東西的原因(許多人以為是在抓非法的解碼器)。

用戶端這邊並不是把Cable往電腦一接就能上Internet了，而電腦向Cable公司租用一個叫CableModem的東西，CableModem則接到一片網路卡，網路卡則插到您的電腦裡面。

許多人聽到又要插卡，就開始緊張了，因為每次一插新卡，電腦就會出問題，不是這裡衝到，就是那裡衝到，最後電腦只有送回原廠去維修。

所以，每一家打著當ISP的Cable公司，都雇用為數不少的技術人員，專門到府安裝CableModem。

據目前所知，如果您簽一年約，每個月只要付$55(加幣)，如果按月付錢，則每個月是CAD$65。這個費用已經包含CableModem的租金了。

第一次安裝時，您要支付約CAD$150-200的安裝費(視您的電腦狀況而定)。一般會有一位技術人員到您家幫您安裝。目前是在促銷期，所以安裝費只收CAD$50元。

至於Cable Internet的速度，理論上可以到30M，但目前約只有下載10M，上載則約2M。

由於Cable的線路架設結構的問題，所以當有大量用戶同時上線時，每位在下載資料的用戶，其下載速度可能會降至500K左右，但還是比目前價值的33.6K快上許多。

最後的一點是，由於Cable是全天24小時連著，您可以透過Internet來打Internet Phone，不必擔心ISP給您的每月時間限制額過。

如果以一條Internet專用的電話線(就是向BCTEL申請一條專用電話，但只用來上Internet用)再加上ISP的費用，一個月約要花$40，而且只有33.6K(或56K)的速度。別忘了，您還要花錢買一部約$100-300的數據機(MODEM)?

但是您用Cable Internet，只要先花$50(目前促銷價)的安裝費，然後每個月再花$55就可以24小時連在Internet上，而且它的速度是以Mega來計算，而不是電話的ISP用K來計算哦!

這樣看來，電話的ISP是不是已經走到盡頭了呢?[illegible]看不敢價，大家可以拭目以待!

四、Internet上的多媒體市場

Internet上的使用者目前已經可以在電腦上欣賞到音樂、電影、錄影電和歌劇等節目，不少新節目都是從以往收音機和電視黃金時期的代表作中抽取出來的，如問答遊戲節目、談話性節目、肥皂劇、卡通電。不同的是這些節目一經儲存在Internet，用戶可以隨時隨地收聽。1995年4月，一位名叫電拉電的電人在美國西雅圖成立了一間名為Progressive Networks的公司。他們把電台播放的節目收入網站，供一般人由Internet接收。

電拉電使用了一種名叫RealAudio的資料壓縮技術，所以聲音品質很好，只要先選擇該節目的代號，便可以立即從電腦的喇叭中聽到。如果只想收聽某一部段的節目，聽眾只需在電腦螢幕上電擊暫停、回撥、前進電按鈕即可。

美國的一些大型廣播電台已取價利用RealAudio技術的裡頭，以便透過Internet來播放他們的轉播性節目。例如，國家公共電台(National Public Radio)已利用RealAudio在Internet上播一些新聞時事節目；ABC電台亦把該台每小時的新聞電送上Internet，計劃中還會利用這技術來價個問答遊戲和某價性節目，使Internet上的聽眾更能投入電台節目。

事實，目前見到的World Wide Web瀏覽器(NetScape電)也都可以直接安裝RealAudio的Plugin程式，就有能取還電資訊的能力。

目前，RealAudio又發展了一種RealVideo的技術，使得在Internet上看電視、電影已經不是夢想。最新版的是Real Player (Real Audio + RealVideo) V4.0。

裝上這樣的軟體，您就可以直接在網上同時看華視新聞、或是觀大紅白對抗這著名的中文節目了!

筆者已經很久不看20、55台那種經過剪輯的新聞報告了，直接透過Internet看沒經過剪輯及完全沒有任何廣告的節目豈不更過癮!

五、結語

如果您在安裝RealPlayer有什麼問題，歡迎與筆者聯絡(jiolin@intergate.bc.ca)，WebSite：http://www.cads.com.tw

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- Dragon Writer Asia Suite (USA)
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- 中文手寫筆系列：蒙恬筆、個品筆、個筆、蒙友博士筆、筆聖，全部九折(90% off Chinese Pen)
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- 中文 Window 32 位元專業版　$380

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- 魔石神劍傳、明星志願2，戀愛物語，超時空英雄傳說2，Internet麻將
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PIC and Dragon Writer are available at Chapters Bookstores across Canada.

Have you been fully utilizing the Internet yet?

Send video mail to your friends and family over the Internet. Lets you express yourself with full-motion colour video and audio

如何可以充份利用國際網路？今日日新月異的電腦科技為我們帶來很多方便，不單可以收看中、英文資訊及使用電子郵件，更可藉電腦影視系統的幫助，好讓我們和遠方的親友相見，再沒有因海角一方，離鄉別井之苦。

Video Camera 電腦影視系統

You can always enclose your smile along with your message through video mail.

一般同類電腦影視系統價錢由$300 $350左右。分別在接收效果和產品特性方面。請留意下期多項產品詳細介紹。

The price for video camera system ranges from $300 to $350 including camera, capture card and software. The differences between brands are based on effectiveness and product features

Handwriting E-mail 手寫電子郵件

In addition, you can e-mail in your own Chinese handwriting to your friends and relatives. 現今電子郵件不一定要依靠鍵盤輸入內容，可藉手寫筆在電子郵件上筆寫收、發信件。既親切又自然。由市面流行的電腦和電筆都附送手寫電子郵件程式，可讓閣下在電子郵件上保持原有筆跡和個人書寫風格，亦不用另加中文軟件。

Add-on Chinese software products

Which one is the best buy and the most reliable operating on English Windows 95 and NT? 那一套外掛式中文軟件最好及最實用？

中文軟件分門別類，各有所長，應視乎個人或公司預算的需要而選擇。一些外掛式中文軟件性能超卓，但較為複雜難用。反之，一些中文軟件以簡單易學為其中產品特性之一，每每吸引不少支持者。

為大家介紹和已廣泛使用外掛式中文軟件(零售價SRP $299)：

- 加盟 Unionway
- 雙橋 TwinBridge
- 蟠龍 Dragon Writer

此外，還有一類電腦值套裝牌子，如華夏軟件可供選擇分電通裝$299、金裝$349和白金裝$399

- 華夏 Chinese Gateway

其它較便宜的牌子($199)：

- 顯顯中文系統 ChinesePro
- 利方多元系統 RichWin

在眾多中文軟件中，雙橋歷史悠久，一度為廣大朋友所選用，而功能亦算不錯。一直以來，雙橋內附有英漢辭典、單字翻譯器及造字庫和[illegible]。但隨現今中文軟件科技的發展和改良，很多新中文軟件已面世，除功能特別多以外，當中亦有部份軟件產品改進三十二位元。但雙橋仍然是一個十六位元的外掛式軟件，只能支援視窗3.1和95。對一般個人或家庭式電腦使用人仕來說，使用雙橋中文系統亦可以。

選擇一套適合的中文軟件應視乎其型號，性能和電腦系統要求。當然，價錢方面亦是重要因素之一。對部份客戶來說，選購最貴的一套中文軟件，不一定最適合。反之，日後一連串系統升價和加RAM，麻煩便會更多，所有額外的開支加起來，往往超出預算。

- Video conference over Internet 跨國業務的朋友可在國際網路上作視像會議
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所謂一分錢一分貨，一般盒裝版的中文軟件，必內有註冊證明書。購買者可得到制造商的承認、完善技術支援、新產品優先通知及特惠價。一些有聲譽的公司對顧客售後支援服務是非常重視。

本地銷售商亦應該對自己所代理的軟件有所認識。不然，顧客在使用軟件遇到困難時，得不到快捷的本地支援。[illegible]

買原裝正版的好處是確保軟件為最新貨。[illegible]求一次軟件示範。

Many new powerful Chinese software systems are available these days; customers should view a complete product demos before purchasing. Watch out for any illegal OEM package and old stock. Software is not like a piece of antique. Always go for the newest one in the market if it is all possible

Product News 最新產品消息報導

自六月份開始，精品電筆是32位元，可專電電新的視窗NT系統而制造。

Since June, GoGo Pen 32-bit driver for Windows NT has been released

各位朋友可在國際網路上得到精品電筆Windows NT版本，完全是32位元。漢筆V5.0的解析度(Resolution) 1024 LPI (DPI)，而一些較平宜手寫筆的解析度為256LPI。若解析度低，則電接收到的點數少，程式在判斷文字的準確度較低。

以上資料由快達電腦公司撰寫及蒼峰(精品漢筆)香港公司協助提供
歡迎各方朋友查詢及賜電指教

Information is provided by Angela Yiu (273-0383) of Instant Solutions
GoGo Pen NT version is supported by GeTop Information Inc. H.K. Branch.
www.instant-solutions.com
E-mail: info@instant-solutions.com

Comdex

Continued from page 58

An Eyeful of Printers

In my search of Comdex for a color printer I found several pleasant possibilities. The Canon Bubble Jet 4200, priced at $350 produces a wonderfully detailed color print using a 720x360 dot per inch (dpi) print matrix At that price and quality it would fit into any home and would serve well in a small office The Lexmark 7000 at about $550 produced a delicately shaded sample "photo" using a 1 200x1 200 dpi matrix. The clarity and detail were wonderful. This would make a super small-office printer where color output is required. At $799 the new Epson Stylus 1520 produces stunning near-photo quality prints in large formats (13 6x21 7 in) or banners, using the banner kit The print matrix is 1 440x720 dpi. On high-gloss paper, reproduced photos (at about $1 50 each) were outstanding. Samples of maps showed very fine details I need one. For more information, contact Canon Canada at http://www.canon.com, Lexmark Canada at http://www.lexmark com and Epson Canada at http://www-epson.com —POW

Mellow right out

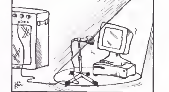
Laptop Laidback comes from our laid-back Maritimes. It s a $65 wooden bed table that s ideally configured for computer use As a matter of fact the Comdex demonstrator spent a comfy few days reclining on a cot proving the point. Have a peek at their Web site for more information at home.istar.ca/~laidback —*LG*

Marvelous Mavica

Imagine taking pictures and using standard floppy disks as film That is what Sony has done with its new Digital Mavica This device is a digital still camera that, amazing as it sounds, saves its pictures in JPEG format on a standard 3 5-inch floppy Each disk can store up to 40 images at 640x480 24-bit VGA resolution. The disk can then simply be removed and the images copied to any PC or Macintosh computer Model MVC-FD5 features a 2 5-inch colour LCD screen for image monitoring and picture review as well as a built-in flash and self-timer It has a suggested retail price of $199 Model MVC-FD7 also features a 10x optical zoom lens, manual/auto focus and five preprogrammed exposure settings. It has a suggested retail of $999 For more information, visit http://www. sel.sony.com /SEL/consumer/mavica/wgreet.html .—*KL*

Smart Board

The Smart Board is a Canadian-developed tool that lets you electronically annotate a computer-based presentation, right on the projection surface, then save those annotations to a file for distribution to meeting participants. As well the board's touch-sensative surface permits control of slide changes and such with a gentle tap, so you don t have to wrestle with a mouse on an always too-short cord. There are several models of various sizes, for both front and rear projection. Prices start at about $1 650 Check it out on the Web at http://www.smarttech.com —*LG* ◆



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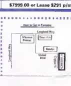

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